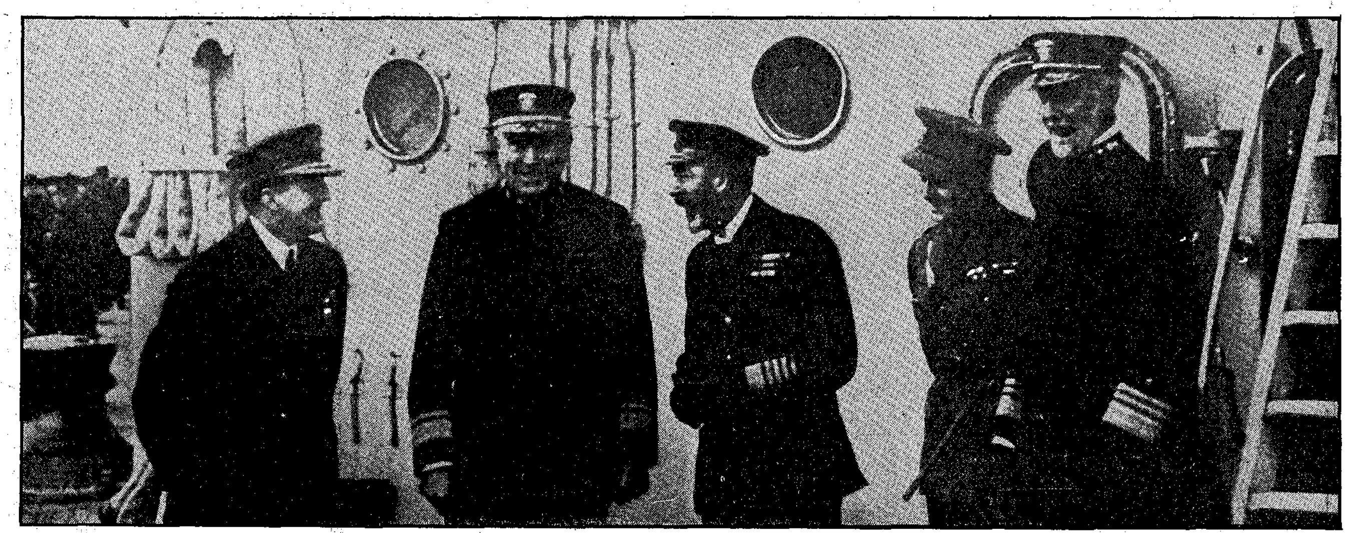
THE LITERARY DIGEST

PUBLIC OPINION (New York) combined with THE LITERARY DIGEST

Published by Funk & Wagnalls Company (Adam W. Wagnalls, Pres.; Wilfred J. Funk, Vice-Pres.; Robert J. Cuddihy, Treas.; William Neisel, Sec'y), 354-360 Fourth Ave., New York

Vol. LXIV, No. 5 New York, January 31, 1920 Whole Number 1554

TOPICS - OF - THE - DAY



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PHOTOGRAPHIC PROOF OF BRITISH-AMERICAN NAVAL COOPERATION.

They are, from the reader's left: Admiral Sir David Beatty, Commander-in-Chief of the British Grand Fleet; Admiral Hugh Rodman, now Commander-in-Chief of the United States Pacific Fleet; King George V.; the Prince of Wales; and Admiral William Snowden Sims.

ADMIRAL SIMS'S DEPTH BOMB

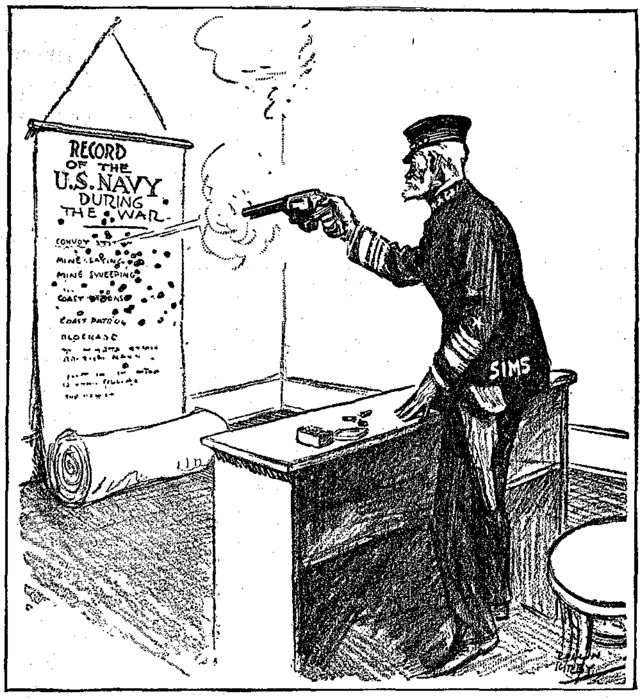
DOES RESPONSIBILITY for the prolongation of the war and the sacrifice of many lives lie at the door of the Navy Department? This grave question, raised by Rear-Admiral William S. Sims's sensational arraignment of Secretary Daniels's Department, will not down until it is authoritatively answered, our press agree. "It is difficult to escape the conclusion that either Secretary Daniels should be kicked out or the Admiral subjected to condign punishment," thinks the New York *Tribune* (Rep.), and correspondents report a feeling in Washington that the situation is one that "must finally break either Sims or Daniels." "The public will suspend judgment until the facts are known, but it will insist upon all the evidence bearing upon Admiral Sims's charges being produced," affirms *The Press* (Rep.), of Portland, Maine. These charges are to be welcomed for one reason at least, remarks the Baltimore *Sun* (Ind. Dem.), "for they bring to a head a mass of rumors and insinuations that have been floating around Washington for a long while." The situation, this paper adds, "demands a complete show-down." And Secretary Daniels welcomes the suggestion with this confident statement: "We are so well fortified, not with perfect wisdom, but in things accomplished by the Navy, that the more people learn about the work of the Navy in the war the more satisfied they will be that we did a good job. We are proud of our record." There are papers, of course, which are ready to take sides in this controversy on the personal records of the principals without waiting for the final show-down, but the press in the main advocate a reservation of judgment until a Congressional investigation has laid all the facts before the people. Some, like the New York *World* (Dem.), emphasize the Admiral's "indiscretion" in attacking the war-record of our Navy while we are still "at war"; and Mr. Hearst's New York *American* declares that the Senate should investigate, not Secretary Daniels's conduct of the war, but "Sims's conduct during the war and since the war."

Admiral Sims also charges that on his departure to England in March, 1917, as a special representative of the Navy Department, he "received the following explicit admonition":

> "Don't let the British pull the wool over your eyes. It is none of our business pulling their chestnuts out of the fire. We would as soon fight the British as the Germans."

Altho this amazing statement of the Admiral's exploded loudly in the head-lines, it was largely discounted in the editorial columns, especially after Secretary Daniels denied that the instructions were his. Some editors demand enlightenment as to the identity of the responsible official of the Navy Department who used these words, while others dismiss them as a jocular reference to Admiral Sims's well-known British sympathies. Even in England the London *Daily Express* characterizes the warning as a reasonable one to give at that time, "for we all know that in the early stages of the war and almost until the United States took part in it, there was considerable anti-British sentiment in certain quarters." And the same English paper goes on to say: "It should be recorded in America's favor that when she was in the war there was a whole-hearted effort to stand by Great Britain and her allies, and that her Navy in particular, placing itself unreservedly under the control of British commanders, did wonderful and unforgetable service." Secretary Daniels, in a letter to Chairman Page of the Senate Naval Affairs Committee, thus describes the conditions under which Admiral Sims was sent to England:

"In the latter part of March, 1917, after relations had been broken off with Germany and the American Navy had begun to arm merchant ships, Rear-Admiral Sims was summoned to Washington.



SOMETHING THE ENEMY NEVER DID.

—Kirby in the New York *World*.

"He was informed by me that he had been selected to go to London as special and confidential representative of the Navy Department. . . . . . .

"At that time Congress had not declared war. Admiral Sims was cautioned to perform no act and to make no public statement that could commit this country to any course pending declaration of the country's policy by the President and the Congress.

"In this connection I reminded him of the statement in his Guildhall speech in England when he was a younger man, for which he was reprimanded by President Taft: 'If the time ever comes when the British Empire is seriously menaced by an external enemy, it is my opinion that you can count upon every man, every dollar, every drop of blood of your kindred across the sea.'

"I told him he was selected not because of this speech, but in spite of it, believing he would exercise the discretion and diplomacy which the confidential nature of his mission necessitated, and that his wide acquaintance with naval leaders abroad would facilitate his obtaining for the department at first hand the information desired by this Government."

"Neither official nor unofficial England is likely to take seriously" the admonition quoted by Admiral Sims, thinks the Springfield *Republican* (Ind.), which adds that "whether or not the matter was discreetly put, the unnecessary revelation of it is a blazing indiscretion." But in *The Wall Street Journal* we read:

"Anglophobes in Washington, failing to help Germany directly, were determined that the victory over the powers of evil should cost the hated English every possible ton of shipping and every last life, civilian and naval, that ineffective cooperation at Washington could insure. Germany's great schemes but for this might easily have toppled at least a year before the armistice was granted."

The Admiral's indictment of the Navy Department for inefficiency in the conduct of the war is set forth in a long letter which he wrote to Secretary Daniels and read before a subcommittee of the Senate Committee on Naval Affairs. At the end of this letter he sums up his charges as follows:

"The manner in which our naval operations were conducted clearly shows that the following grave errors were committed in violation of fundamental military principles; and it is manifestly desirable that such violations should be avoided in the future.

"1. Altho war with Germany had been imminent for many months prior to its declaration, there was no mature plan developed or navy policy adopted in preparation for war in so far as its commander in Europe was informed.

"2. The Navy Department did not announce a policy until three months after war was declared—at least not to its representative and commander of the forces in Europe.

"3. The Navy Department did not enter whole heartedly into the campaign for many months after we declared war, thus putting a great strain on the morale of the fighting forces in the war by decreasing their confidence in their leaders.

"4. The outbreak of hostilities found many important naval units widely dispersed and in need of repairs. Destroyers arriving in the war-zone had been cruising extensively off our seaboard and in the Caribbean, and when war was declared were rushed through a brief and inadequate preparation for distant service.

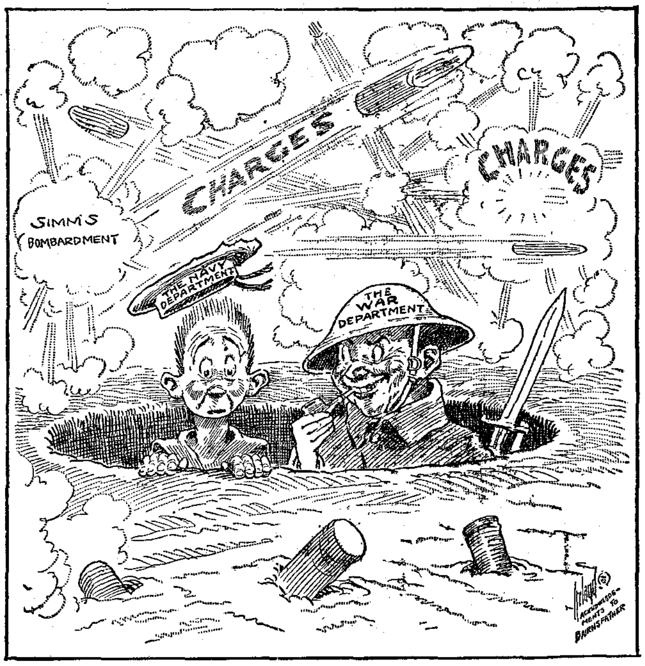
"5. During the most critical months of the enemy's submarine campaign against the Allied lines of communication, the department violated the fundamental strategical principle of concentration of maximum forces in the critical area of the conflict.

"6. The department's representative with the Allied admiralty was not supported during the most critical months of the war, either by the adequate personnel or by the adequate forces that could have been supplied.

"7. The department's commander in the critical area of hostilities was never allowed to select his principal subordinates, and was not even consulted as to their assignment. A fundamental principle of the art of command is here involved.

"8. The Navy Department made and acted on decisions concerning operations that were being conducted three thousand miles away when conditions were such that full information could not have been in its possession, thus violating an essential precept of warfare that some decisions necessarily depend upon complete information.

"9. Instead of relying upon the judgment of those who had had actual war-experience in this peculiar warfare, the Navy Department, tho lacking not only this experience, but also lacking adequate information concerning it, insisted on a number of plans that could not be carried out.



"WELL, IF YOU KNOWS OF A BETTER 'OLE, GO TO IT!"

—Ireland in the Columbus *Dispatch*.

"10. Many of the department's actions so strongly implied a conviction that it was the most competent to make decisions concerning operations in the war-zone that the result was an impression that it lacked confidence in the judgment of its representative on the council of the Allies and its responsible

> commander in the 'field.' It is a fundamental principle that every action on the part of superior authorities should indicate confidence in subordinates. If such confidence is lacking, it should immediately be restored by ruthlessly changing the subordinate.
>
> "11. 'To interfere with the command in the field or afloat is one of the most common temptations of the Government—and is generally disastrous.'—'The Influence of Sea-Power Upon History.'—Mahan.
>
> "The Navy Department did not resist this temptation, and its frequent violation of this principle was the most dangerous error committed during the naval war."

"If there was one branch of government war-machinery which to the layman seemed to work smoothly and without the customary scandal, that one was the Navy," remarks the Philadelphia *Evening Ledger* (Ind.); and the Buffalo *Express* (Rep.) agrees that "after the impression had been well established that the Navy had made a record of efficient administration during the war, it is somewhat disconcerting to hear Admiral Sims's revelations of the difficulties and lack of support against which he struggled." The anti-Administration New York *Sun* (Ind.) emphasizes the weight given to Admiral Sims's words by his "professional prestige, his popularity, and his record as a fighting reformer in the Navy." "No one who will give a careful reading to the Sims letter can fail to be imprest deeply by the array of evidence which he adduces to support his contentions," says the Philadelphia *Public Ledger* (Ind.). And in the New York *Tribune* (Rep.) we read:

> "Apart from its personal aspects the investigation will also help to settle a vital question of navy policy. When Congress created the office of the Chief of Naval Operations the Navy hoped that it had at last acquired an instrumentality analogous to the Army General Staff. What was wanted was an organ of professional opinion, representing the intelligence of the men who had to operate and fight the fleet, which could hold in restraint the unprofessional judgments of a civilian Secretary.
>
> "Mr. Daniels never took kindly to a lessening of his authority. The Sims charges suggest that he used the office of the Chief of Naval Operations simply as an agency to enforce his own views. Thus the Navy Department was led into the error of trying to conduct the war from a desk in Washington, instead of giving the commander in European waters a free hand to conduct it in association with the responsible heads of the British and French navies.
>
> "The committee, then, should go deeper than any mere differences as to particular measures of strategy during the war. It should investigate Mr. Daniels's policy from the beginning of his administration and its effects in the way of consolidating all authority in his own hands, thus preventing the development within the Navy of a system of sound and authoritative leadership in purely military matters."

Foremost among the papers which condemn the Admiral's course is the New York *World* (Dem.), which points out that, "in effect, Admiral Sims's grievances lie against the Constitution, which makes the President the Commander-in-Chief, and against the custom of naming civilian heads for our fighting forces. Yet civilian control is a bulwark of political freedom which neither the British nor the American people will ever surrender." And in another issue of the same paper we read:

> Charges so general and of such a character may and doubtless should impress Congress as worthy of most rigid investigation. But they will fail to impress the American public as either sensational or disturbing in the slightest degree.
>
> "When the record shows that our naval cooperation made the blockade of Germany as perfect as anything of the kind could possibly be; when it shows that thereafter the German High-Seas Fleet went into permanent hiding as against even occasional forays; when it shows that the tide of the submarine war turned instantly and completely against the Germans with that cooperation; when it shows that under convoy of the American Navy through enemy-infested seas the life of not a single American soldier was lost among the many hundreds of thousands transported across the Atlantic—no amount of Congressional investigation can prove failure to cooperate fully in the winning of the war.
>
> "There is the record, and it stands."

THE "FLU" AT ITS WORK AGAIN

"EPIDEMICS ARE THE PUNISHMENT which nature inflicts for the violation of her laws and ordinances," reflects the New York *Evening Mail* in commenting upon the reappearance of influenza. "That punishment," *The Mail* continues, "took more than half a million lives in the United States last year." The still mysterious epidemic that appeared in cities of Kansas and Oklahoma early in the new year has been identified as "flu," the Kansas City *Star* tells us, and reports of this dread disease from such widely separate places as Kansas City, Chicago, New York, Louisville, Havana, Kingston (Jamaica), and army posts at Love Field (Texas), Camp Dix (N. J.), Camp Grant (Ill.), and Coblenz, Germany, lead many newspapers to assume that a recurrence of last year's scourge is abroad in the world. Chicago papers report that, in spite of the most elaborate precautions taken by Health Commissioner Robertson, "flu" cases still are developing by hundreds, or even thousands, daily. The disease happily appears to be much milder than last year, however, in the opinion of the Surgeon-General of the Army and the health commissioners of Chicago, New York, and Kansas City, yet a considerable number of deaths per thousand cases result and still more sufferers die of influenza's more terrible aftermath, pneumonia. The Surgeon-General calls attention to the fact that only a few thousand cases have been found since September 1, 1919, whereas at least 5,000,000 were reported in the same period a year ago, and he further declares that there are large areas in the country, embracing groups of states, in which there is only a normal influenza rate.

If Chicago's health commissioner can possibly stamp out the disease in that city, it will be done, judging from the precautions he is taking. Realizing that cold flats and apartments set at naught other precautions taken, Dr. Robertson has issued the following statement: "If I find evidence against any greedy landlord having turned off the heat, and the tenant dies, I shall ask the State attorney to indict him on a charge of murder." He has also increased the number of school physicians by forty-two; ordered the number of operations in all Chicago hospitals cut to the minimum, as anesthetics render patients susceptible to influenza; ordered all theaters to be disinfected at once; directed all hospitals to exclude visitors; disinfected all street- and elevated cars in the city, and arranged for an emergency force of clerks, doctors, and nurses to deal with the epidemic.

Influenza, as the people of Washington are warned by *The Evening Star*, "is an infectious disease, easily spread through close association. It passes in the form of minute spray from the coughs or sneezes of those who, in the first stages, go abroad and mingle with other persons." New York's health commissioner asserts, too, that "fear is a potent factor in lessening resistance," and he urges people to take precautions such as keeping the body well clothed; circulating a plentiful supply of fresh air in the home, theaters, and street-cars; eating sufficient nourishing food; keeping the body clean; conserving vitality, and summoning medical attention in case of a cold.

Pointing out that those who survived last year's epidemic probably possess considerable degree of immunity to the disease, the New York *Evening World* cautions the general public against worrying, and declares that those who survived last winter have a better chance than they had a year ago. Continues *The World:*

> "Science does not know all the effects of fear and worry, but it is definitely established that the emotions do cause definite changes in the quality of the blood through secretions from various glands which are stimulated by the emotions. In the case of worry and fear these secretions may accumulate until they produce poisons that cause conditions very similar to the disease itself. At the best, worry and fear weaken bodily resistance to disease."

TO CONQUER RUSSIA BY KINDNESS

THE HAND THAT FEEDS RUSSIA is liable to be bitten, in the opinion of some skeptical editors who doubt the wisdom of applying to our dealings with Lenine the apostolic injunction: "If thine enemy hunger, feed him." Yet the unexpected answer to the succession of Bolshevik victories is a decision of the Supreme Council in Paris to modify the existing blockade so as to get the necessaries of life to the people in the interior of Russia. It would seem, as one paragrapher remarks, as tho the Allied statesmen thought the policy of "feed the brute" ought to work as well with a hostile nation as it is supposed to do with a balky husband. At any rate, the Council "has decided that it would permit the exchange of goods on the basis of reciprocity between the Russian people and Allied and neutral countries." For this purpose it was further decided, according to the announcement of the 16th, "to give facilities to the Russian cooperative organizations which are in direct touch throughout Russia so that they may arrange for the import into Russia of clothing, medicines, agricultural machinery, and the other necessaries of which the Russian people are in sore need, in exchange for grain, flax, etc., of which there is a surplus supply." It is explained that these arrangements "imply no change in the policies of the Allied governments toward the *Soviet* Government."

This final statement is said to have been added to please Clemenceau, who objected to lifting the blockade, and it is received with open skepticism by the press in London, Paris, and New York, where the decision is spoken of variously as "a change of policy" or "new policy." And it is a change for the worse, in the opinion of many. A writer in the *Écho de Paris* wonders how "we are going to do business with the subjects of Moscow without doing business with Moscow, since by military requisition they can take anything sent into Russia," and how one is "going to help increasing their prestige if one gives the *Soviet* leaders at the hour of their military triumph that which they have demanded for so long." In connection with these queries, it is interesting to note that a recent wireless message from Moscow began with the words: "The blockade ring has been broken by the victories of the 'Red' army." In England, the London *Daily Chronicle* points out the peril it sees in the new move:

> "We are to send clothing and boots into Russia, but we take no guaranties that the Bolsheviki will not make the obvious use of them, namely, directly or indirectly, to improve the clothing of the armies which are to march in the coming season against Poland or Lettland, Armenia or Mesopotamia. The Allied Powers must really make up their minds whether they are to be at war with *Soviet* Russia or at peace. There is no safe or satisfactory middle way between these elementary alternatives."

In our own capital the Washington *Post* denounces the lifting of the blockade as "Surrender to Bolshevism." Lenine and Trotzky, it thinks, "would welcome other moves of this nature."

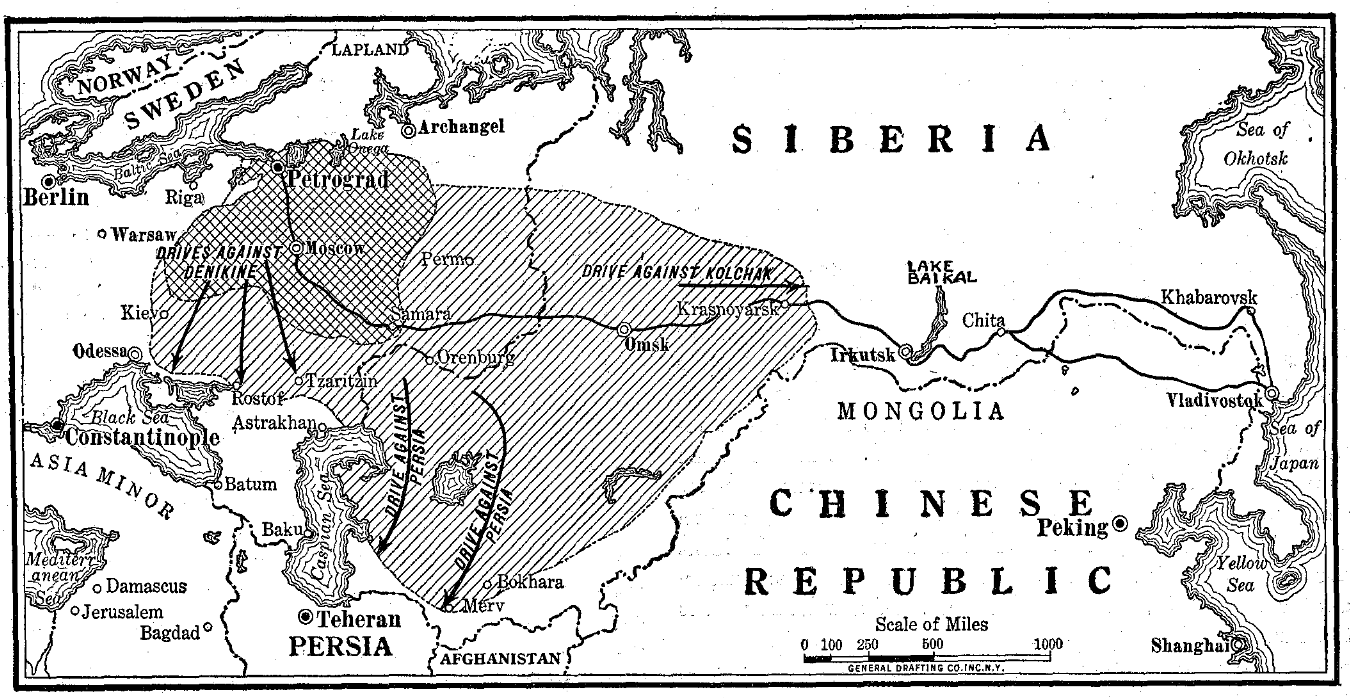
> "If the Allies are willing to give food, perhaps they will also furnish arms and munitions to the Bolsheviki, with which to murder Poland and Roumania. Why not? It is as foolish to feed the Bolsheviki as it is to arm them."

Similarly calling it "Peace by Surrender" the New York *Times* takes a dig at Mr. Lloyd George, who, "having failed to kill the wolf, now offers him a juicy bone." It is a complete change of policy, in the opinion of this New York paper, and "must mean the early conclusion of formal peace." Otherwise, we read:

> "We should have the continuation of a state of war in which one side supplies the other side with anything it may need. England could hardly remain in nominal alliance with Poland and Roumania and furnish the Bolsheviki with material to be used in the war against Poland and Roumania. It has been said that peace would bring a speedy change in Russia; that without a war to evoke some support from national feeling the Bolsheviki would soon be ousted by Russian moderates, or be compelled themselves to become so moderate as to be unrecognizable. War, it has been argued, only strengthens Bolshevism; peace must mean its downfall. It is somewhat surprizing that this argument is presented most loudly by those who do not want to see the downfall of Bolshevism, who are the friends and apologists of Lenine's régime. Nevertheless, there is more hope of a collapse or metamorphosis of Bolshevism in a full state of peace than in a state of war where we send supplies to our enemies."

An anti-Bolshevik Russian who agrees with these skeptics is Mr. V. N. Bashkiroff, the American representative of a Siberian company, who believes "it will be impossible for the Russian cooperative organizations to distribute what goods the Allies send to *Soviet* Russia among the peasants, for the *Soviet* Government will seize all the goods, or at least influence their distribution. The result will be that the *Soviet* Government will see that its army and its employees are supplied first." Another unfortunate affect of the lifting of the blockade, in the opinion of this Russian, "will be that the 'Reds' will be made stronger in the minds of the people in *Soviet* Russia, for the *Soviet* officials will explain to the people that the blockade was lifted by the Allies because the Allies now recognize the *Soviet* Government." The American-Russian Chamber of Commerce has also issued a statement saying that there can be no real restoration of production in Russia until after a change of government, and that the lack of money, credits, and transportation facilities will make it impossible for some time to resume trade with Russia to more than a negligible extent. "It is not only impossible," on account of the collapse of the railways, "to get out any large supplies, but the idea that food and clothing can be supplied adequate to make any impression on the suffering Russian population is an iridescent dream."

Yet as we glance at editorial opinion throughout our own country we find approval of the new Russian policy apparently predominant. The Newark *News* calls it "the most sensible and hopeful move that has been made in dealing with the Russian muddle." Until now, it says, "Lenine and Trotzky had been living in a favorable artificial atmosphere with outside forces propping them up and helping them to retain their power." But now "Russia will have to stand the test of international competition," and will "trade in the markets of the world where its currency will be subject to the laws of exchange and its industrial communism will have to compete against the industrial individualism of other peoples." This optimistic daily even believes that "the alarm over *Soviet* expansion in the Caucasus and into Transcaspia and Turkestan concerns a situation which may perhaps be composed by fair dealing and moderation," and it sees in the new phase of the Russian situation "a promise of the beginning of peace in Eastern Europe." If any armies from Western nations are to enter Russia, it is extremely important, the Buffalo *Express* thinks, "that the Russian people should look upon them as friends and deliverers, and not as alien conquerors. The opening of trade through the medium of the cooperative association will naturally tend to promote that idea, and even if war is to occur in the spring it might have results on the Russian morale that would outweigh any military disadvantages." The Philadelphia *Press* approves of the "about-face in Russia," which "gives the Russians a chance to work out their own salvation, a thing they were unable to do under the double handicap of the blockade and the military 'saviors' the Allies forced on them." "A ray of sanity," the Pittsburg *Leader* calls it. In the South, the Chattanooga *News* indorses the logic of the Lloyd George reasoning. "The blockade has infuriated Russia. It has enabled the radical elements to secure the support of conservatives who otherwise would have taken up arms



BOLSHEVIK EXPANSION SINCE JULY 1, 1919.

The heavily shaded territory has been held by the *Soviet* Government against all drives. The lighter shading shows the extent of Bolshevik advances to the east and south. The Allies have left the Arctic front, and the holding of the Trans-Siberian Railroad is to be left to the Japanese.

against the *Soviet* system." The Tennessee daily is confident that "resumption of trade with Russia will encourage the anti-radical elements in that country and may lead to their representation in the Government, so that finally we shall be in a position to recognize the Government of Russia." "When we resume trade our ideas have a chance to be planted and to propagate," it is noted, and besides, "Lenine can no longer rally all Russians against us, because we are seeking, as he says, to starve the women and babies of his country." Another powerful argument is found by the Boston *Globe* in its belief that continuance of the blockade against the *Soviet* state "involves the peril of throwing Germany into the arms of Russia," that is to say:

> "If the blockade of Russia were to continue, Russia and Germany would find themselves being forced inevitably together, with Russia needing Germany's managerial brains and Germany needing Russia's natural resources. And such an alliance would be fraught with disquieting prospects for Europe.
>
> "In truth, Germany's need of Russia's natural resources and food-products is a small-scale blue-print of what ails the whole of Western Europe to-day. Western Europe's desperate need of money and food is only the result of its being artificially shut off from that vast and almost virgin territory of Russian resources and markets. It may be true that the United States will have to finance the bulk of the rehabilitation of Western European industry; but before business can get back to normal, the western and eastern halves of Europe will have to be reopened to each other somehow. As a matter of economic structure they can not keep house without each other."

For once we find radical and labor newspapers in close agreement with financial journals on a matter of foreign policy. For instance, a Labor weekly, *The Cleveland Citizen*, likes the change of policy toward Russia, since it believes "war and blockading and other repressive measures are not only not stamping out Bolshevism, but spreading the idea throughout the world." The new policy seems "a wise one" to the New York *Commercial*, and the New York *Journal of Commerce* thinks that international trade with the cooperative societies will add to their prestige and power and they are likely to "be able to exercise a moderating influence to the end that out of the existing chaos and confusion might emerge a government of all the people of Russia." The New York paper adds that the governments "still nominally at war" with Moscow had no other course open to them but to lift the blockade—

> "Military intervention on a scale of sufficient magnitude being out of the question, there was nothing to be gained by keeping up the fiction of an economic blockade. That could be effective only by establishing an impenetrable barrier between Russia and the neighboring nations on the land side and by closing the gaps that were left open facing the sea. . . . Obviously, a continuance of the blockade against Russia would have required the coercion of many states, equally against the will of their people and their plain economic interests."

In financial circles in New York and London the lifting of the Russian blockade is emphatically approved, for according to dispatches from these two world-trade centers it is felt that Russia, her European neighbors, and the world in general will profit. New York business men, we read in the New York *Evening Post*, believe that Europe's food-situation was an important factor in bringing about the decision. It is said that the food which may be obtained from Russia may be sufficient to render much less difficult the problem of feeding Europe between now and the next harvest, and that by providing Russia now with needed agricultural implements the possibility of a world-shortage of food continuing through another year is greatly reduced. The lifting of the blockade is warmly approved by Mr. Herbert Hoover, who says in a statement given to the press:

> "I have advocated, ever since last winter, that the blockade on *Soviet* Russia should be removed on everything except arms and munitions, not because it would do the Bolshevik tyranny in Russia any good, but because I believe the removal of the blockade will take from under them one of their greatest props. For the last year they have laid every failure of Socialism on to the blockade. They daily and hourly blamed the Allied blockade for the shortage of food, clothing, and agricultural implements, and the misery that has arisen therefrom, and they have succeeded in impressing this upon an ignorant people. They have also used it as a stimulus to raise armies under the contention that they are fighting to save themselves from starvation.
>
> "These shortages and this suffering are not due to the blockade, but are due to the total industrial demoralization and bankruptcy in production, which will continue as long as Socialism and the Bolshevik rule lasts. If the blockade is opened, the Bolshevik Government must secure the import of food and clothing at once, and thereby great suffering will be mitigated.
>
> "The acute starvation is in the larger cities. These will be the areas that must receive imported food. The peasants have food enough at home, but after a few months, when they have exhausted the fifty or seventy-five million dollars in gold and securities which they have remaining from the amounts they have stolen from the banks, then they will need to export commodities in exchange for inward goods. No one is going to give

them credit. They have no commodities to export without causing further suffering to their people. They can not export wheat when the population is hungry, nor cotton nor flax when they are in rags. Their imports will then automatically cease.

"The greatest blow they can receive is to have such an exposure of the complete foolishness of their industrial system to their people. Moreover, a lifting of the blockade will allow the real truth of the horror of Bolshevik rule to come out of Russia.

"One thing that needs to be guarded against in the United States is that our frontier and port officers must redouble their vigor against the export to us of Bolshevik agents, propaganda, and money for subsidizing criminals to create revolution."

The most hopeful feature of the new policy of trade with Russia is the dependence upon the cooperative societies, in the opinion of a number of our newspapers. Without these societies, as the Brooklyn *Eagle* remarks, "it would be impossible to resume trade with the Russian people while refusing full recognition to the Bolsheviki." Elaborate plans have been worked out for dealing with these societies, say the Paris correspondents, and an Associated Press dispatch contains a long statement by President Alexander M. Berkenheim, of the Foreign Board of the Russian Cooperative Union, which tells just how the new trade plan is to be carried out. To quote in part:

> "It must be understood the agreement has no political character whatsoever. It is merely an economic, financial, and humanitarian arrangement. Russian cooperative unions, organized fifty years ago, now number five hundred branches and have fifty thousand local societies, with twenty-five million members. These societies operate throughout Russia, whether under Bolshevik rule or controlled by other governments. It is a sort of Russian economic Red Cross. . . . . . .
>
> "The plan is very simple. We have in Russia great stocks of wheat, cereals, cattle, and flax, which, owing to the complete suppression of exportation during the last few years and the record crop of 1919, are now larger than Russia ever disposed of previous to the war. This is especially true in the interior of Russia, where consumption has also diminished. . . . . . .
>
> "We require in return farming and agricultural implements, cloth, shoes, locomotives, motors, automobiles, and medical supplies. Ship-tonnage must be furnished by the Allies, as Russia's shipping has completely disappeared. We must import first in order to export. Ships may enter Black, Baltic, and White Sea ports loaded with goods needed by Russia, and may return with our exports. . . . . . .
>
> "Imports will come to Russia consigned to us. They will be distributed to our stores throughout the country, and we will purchase grain and cereals from peasants, paying them in rubles at a fixt rate. We will also give them scrip entitling them to purchase from our stores imported goods for the identical amount of rubles we paid them when they were selling their own stocks. All dealings must be done through our cooperative societies. . . . . . .
>
> "We do not wish to enter into politics, but feel sure our headquarters in Moscow can reach a satisfactory agreement with the *Soviet* authorities for an impartial distribution."

Maxim Litvinoff, the envoy of the Moscow Government who has been conferring with British representatives at Copenhagen, hints that it may not be so easy for the Allies to trade with Russia in the way they intend, saying:

> "The Russian Government may or not find it convenient to do foreign business through cooperative societies which are now working in full harmony with other *Soviet* institutions. But, naturally, it would resent having its choice of agencies dictated to it from without."

While this economic plan is being worked out, political policies are also being overhauled. Negotiations have been going on between representatives of the Baltic states for a defensive alliance against *Soviet* Russia, and a commission has been appointed to draw up a definite plan. A Paris correspondent of the London *Daily News*, quoted in a New York *World* dispatch, writes that the new Allied policy toward Russia will include recognition and perhaps defense "of what are usually termed the border states of Russia, including not only the western belt, but the three or four republics which the Allies have either recognized or proposed to recognize in the Caucasus."

HOOVER AS PRESIDENTIAL TIMBER

POLITICIANS ARE LEFT GASPING at the astounding stroke of the loyally Democratic and Wilsonian New York *World*, in coming out flatly in a two and a half column editorial for Herbert C. Hoover for President on either a Democratic, Progressive, Independent, or Republican platform. "In point of ability, in point of experience, in point of capacity to deal comprehensively with the new problems of reconstruction, Mr. Hoover towers above all the candidates who have been brought into the contest," asserts *The World*, and we find scores of widely separated newspapers, Republican and Democratic alike, which agree fully in this and other statements made in *The World's* astonishing editorial. Criticism of Mr. Hoover's abilities as an administrator is conspicuous by its absence. Some might find fault with his comparative inexperience as a politician, but, as *The World* and other newspapers say, the "public is tired of professional politicians."

Hoover's unique rôle in the Presidential race "embarrasses the politicians of the Democratic and Republican parties, and delights the formerly helpless general public," gleefully asserts the Philadelphia *Evening Public Ledger* (Ind.). Hoover is needed in the White House, declares *The World*, because—

> "The fundamental rights and liberties of the American people are menaced to-day as they have never been menaced before. On the one hand radicalism is pushing its theories to the very verge of anarchy, and on the other hand conservatism has joined hands with Bourbonism to destroy liberty in order to maintain the extreme individualistic theory of property rights. Between these two greedy groups of fools and fanatics there is a great middle ground which is held by the vast majority of Americans and which they will continue to hold under competent leadership, but competent leadership there must be, and no man better embodies it than Herbert C. Hoover."

"Hoover is not a 'dark horse,'" says one pertinent paragrapher, "rather he is a nightmare to political aspirants on both sides of the political fence." "May his specter penetrate to the darkest corners of the closets where kitchen-cabinets plot destiny," is the prayer of ex-Senator William Alden Smith's Grand Rapids *Herald* (Rep.). The Baltimore *Sun* (Ind. Dem.), which speaks of Hoover as the "Great Neutral," predicts a race between the Democratic and Republican parties to see which can capture Hoover as a Presidential candidate, and says: "Yet Hoover is no neutral when it comes to deeds. His platform is short, and consists, like the motto of the Prince of Wales, of only two words —'I Serve.'"

Dr. Frank Crane, whose editorials on almost everything but politics, first published in the New York *Globe*, are read throughout the world, said in an editorial recommending consideration of Hoover as a Presidential candidate, which appeared two weeks before *The World's* utterance: "We have tried Republicans and we have tried Democrats. Suppose we try just a man. We recommend Hoover simply because he has made good. He is not an orator; he is a man of action. And he is not looking for the place, which helps some." "Hoover may yet find himself at the head of a commission for the relief of bankrupt political parties," predicts the Brooklyn *Eagle* (Ind. Dem.), and Gen. W. B. Haldeman, Democratic National Committeeman from Kentucky, is sure that the Democratic party will select Hoover as their standard-bearer "if he has a drop of Democratic blood in his veins, or a fortieth cousin who is a Democrat." "In Washington the politicians never speak of Hoover as a Presidential candidate," the Washington correspondent of the New York *Evening Post* (Ind.) tells us, and the Philadelphia *Evening Public Ledger* (Ind.) interprets this as "the biggest boost we have yet seen for him."

Scores of quotations similar to the above could be set forth, but the cold bare fact that political conventions, and not the people, select Presidential candidates, still remains. We are reminded by the Rochester *Times-Union* (Ind.) that "It is a favorite habit of some political leaders to favor the colorless candidate, who has aroused no antagonisms, to the more positive personality who has done much but who has antagonized in the doing." But we are also told that he has made hundreds of thousands of friends, and that a man of Hoover's amazing organizing genius could quickly organize another party and "poll an unprecedented independent vote." "Whether his candidacy would satisfy those practical political exigencies of which the party must take note in selecting its standard-bearer is another question," declares the Charleston (S. C.) *News and Courier* (Dem.), and while the Brooklyn *Eagle* (Ind. Dem.) is sure there is "reason to believe that the Administration might view the Hoover 'boom' with a friendly eye," it tells us that "the strictly machine Democrats, who manage the party's national politics, look askance at Hoover, and raise the question as to his politics."

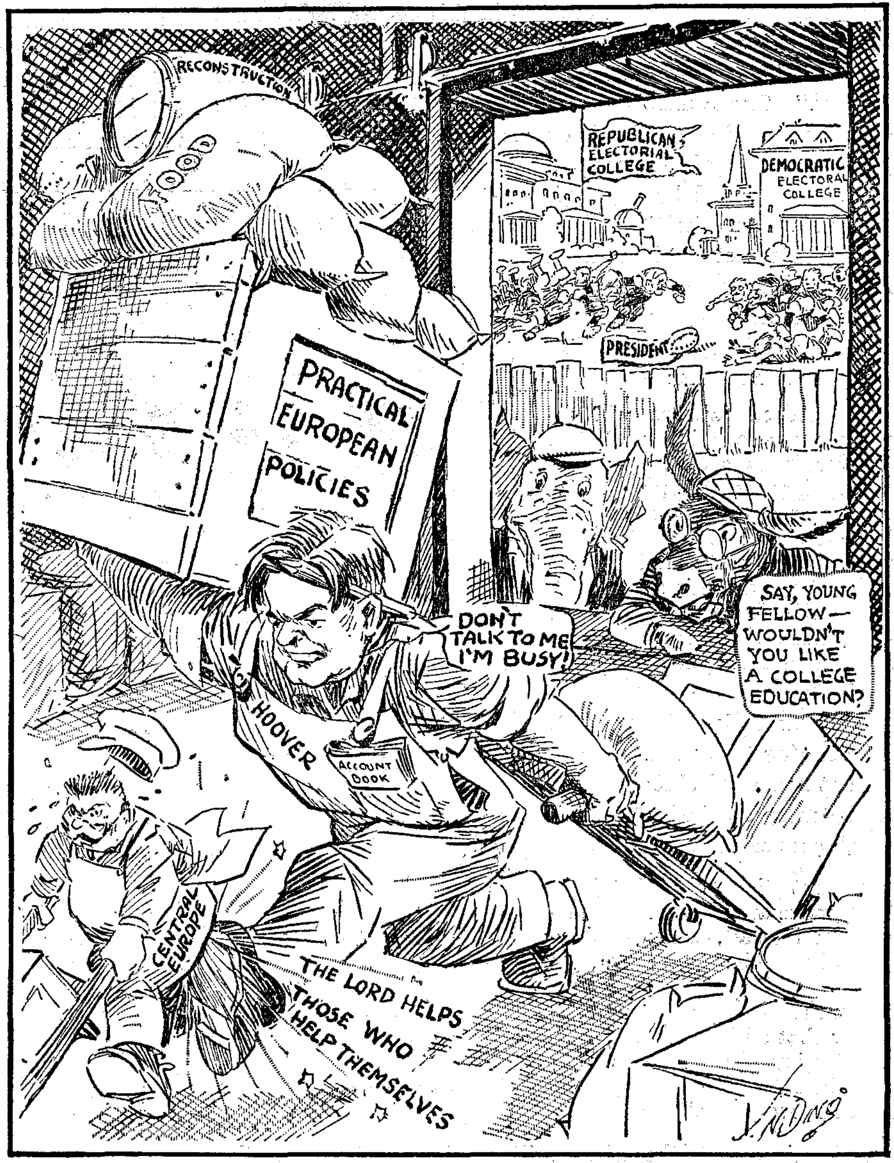
Opposition from the Republican ranks is also forthcoming. Friends of Republican candidates already in the running and ready to be brought forward are frankly skeptical of Hoover's chances as a Republican. Among those who have favored the Hoover boom with a frosty stare are Senator Johnson's backers, some of whom are in New York. These gentlemen, recalling Hoover's earnest plea to Californians to help elect a Democratic Congress to uphold the President's policies, are said by the New York *Times* not to take the Hoover boom seriously, and to believe "that his only chance of being elected President is by running on the Democratic ticket." The Montgomery *Advertiser* (Dem.) suggests that "before any Hoover 'boom' gets under way in the Democratic party we suggest that the gentleman be invited to declare himself as a Democrat. The party should not commit itself to any candidate without first questioning him as to his convictions in respect to party measures."

Hoover appears to be the unenthusiastic recipient of friendly overtures from the Democratic ranks and smiles from Republican strongholds, altho his political affiliations—if he has any—are little known. He can not be accused justly of flirting with either party, in view of his repeated statement that he has no political aspirations. As a matter of fact, Hoover, at the present time, appears to be the great political enigma. "It is significant," says the Chicago *Tribune* (Rep.), "that among those now talking of Hoover for President are personal friends and ardent supporters of President Wilson."

Mr. Julius H. Barnes, United States Grain Director, a lifelong Republican and close personal friend and business associate of Hoover, recently at the annual banquet of the National Wholesale Dry-Goods Association declared that his partner's political affiliations lay "with the Progressive Republicans," but at the same time strongly intimated that Mr. Hoover might even become, under certain circumstances, a Democratic candidate. Mr. Barnes said further:

> "I have known Herbert Hoover intimately through several years of close association in his work. I feel that from that knowledge I can state that he will never allow himself to be a candidate for high office nor allow his friends to make an effort in his behalf unless there shall come such indisputable evidence of such spontaneous and universal popular demand that it will overwhelm his present resolution not to enter politics."

In the words of the Brooklyn *Eagle* (Ind. Dem.), "Hoover's hat was thus shied into a ring already somewhat crowded with headgear," even if its owner did not altogether approve the action.


RECONSTRUCTION
FOOD
PRACTICAL EUROPEAN POLICIES
REPUBLICAN ELECTORIAL COLLEGE
DEMOCRATIC ELECTORAL COLLEGE
PRESIDENT
DON'T TALK TO ME I'M BUSY!
SAY, YOUNG FELLOW—WOULDN'T YOU LIKE A COLLEGE EDUCATION?
HOOVER
ACCOUNT BOOK
CENTRAL EUROPE
THE LORD HELPS THOSE WHO HELP THEMSELVES
J.N. Ding

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HE'D MAKE A GOOD CENTER RUSH FOR SOMEBODY.
—Darling in the New York *Tribune*.

If Hoover is nominated and elected, he will have two precedents in the elections of General Grant, who had never been a Republican when the Republicans nominated him for the Presidency, and Zachary Taylor, who had not voted for forty years when he was nominated and elected. As the Boston *Herald* (Ind. Rep.) says:

> "Hoover would represent the Great War. His election would be giving us a President out of the war. He would stand for the altruism and the idealism and the sacrifice of America in the war. The women would like to vote for him, and they will have the ballot in a goodly bunch of states."

William Allen White, in an Emporia (Kan.) *Gazette* (Ind.) editorial, says that "Hoover could be elected on the Republican ticket." "He has all the elements of strength that Roosevelt had," this paper continues, "the people are for him, and the organizations are against him." The New York *Globe* (Rep.) gives many reasons why the people would vote for Hoover as President:

"The strongest supporters of the young Californian admire him for the exact reason that he is not a politician. Business men approve him because they think he is one of them and would give the country the 'sound business administration' for which they have been sighing these many years. Much of the labor vote would go to him on the theory that he is a benevolent neutral on the industrial questions which are now stirring the country."

Politicians and labor-leaders have come to recognize the farmer as a very powerful element in this country. We read in the Binghamton (N. Y.) *Press* (Ind.) a general statement to the effect that "just now Hoover is not very popular with the farmers." The Buffalo *Commercial* (Rep.) opines that "if the farmer vetoes the nomination of Hoover, that settles it; no party can afford to pick a candidate opposed by the agriculturists." And the Washington correspondent of the New York *Evening Post* (Ind.) sets forth in specific terms just how Hoover's possible candidacy is viewed by the American farmer:

"Organized farmers will repudiate the candidacy of Mr. Hoover if he should be nominated, they assert, now that the matter is taking a more definite shape. His record on the farmer's high cost of living is unsatisfactory, and his sympathies are in the wrong place, or were throughout his term with the Food Administration, they are convinced."

The New York *Tribune* (Rep.), after stating that "Mr. Hoover, both at home and abroad, is one of the most admired of Americans," goes on to say:

"About the only abstainers from praise are those of the agricultural interest, who can't see why wheat-raisers were tethered by a fixt price while others were allowed to profiteer freely on the theory that an increase in prices would stimulate production and that the interest of the public was in increased production rather than in low prices."

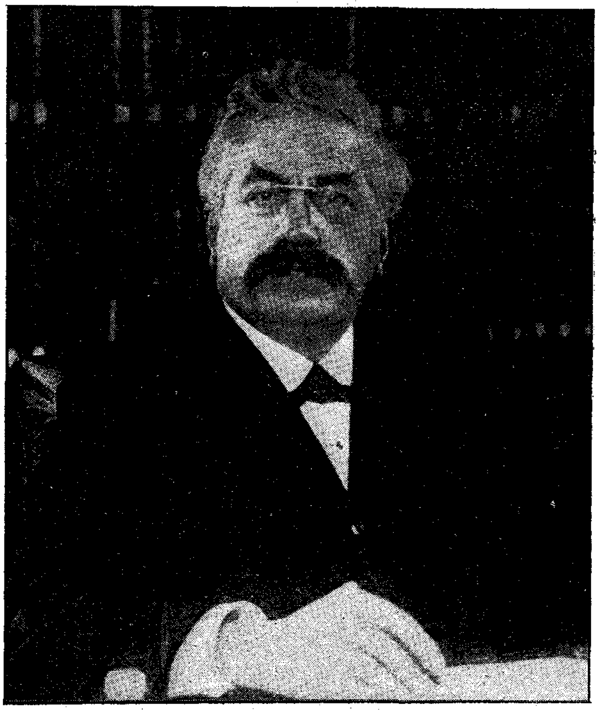
Intimating that the Hoover "boom" emanated from the White House, and that Hoover is the political heir of President Wilson, the Rochester *Democrat and Chronicle* (Rep.) emphatically states that "the Democrats are not going to nominate a candidate for President who calls himself a Republican, no matter how he qualifies his Republicanism." The St. Louis *Post-Dispatch* (Ind.), which is from Missouri, also inquires:

"What are Mr. Hoover's qualifications as a statesman? We know from his utterances that he has an understanding of business, of the factors in industry and commerce, and of the just relations of labor and capital and the public. But has he a thorough understanding of questions that go deeper than these—questions that touch the fundamental basis of free government? Is he able to distinguish unerringly the powers and limits of our constitutional government?

"We need something more than a business organizer and successful administrator in the Presidency. We need something more than merely an honest, capable man and a devoted public servant.

"We need a statesman with a thorough comprehension of the fundamental principles underlying our republican institutions and with the courage to apply them to our problems. We need a man who understands the relations that should exist between the Government and the people. We need a man who understands and firmly adheres to the constitutional powers of the Government and who respects and upholds the constitutional rights of the people."

CLEMENCEAU'S FALL AS VIEWED HERE



"THE TIGER'S" SUCCESSOR.

Alexandre Millerand, Minister of War in the first French War Cabinet and Governor of Alsace-Lorraine since last March, was called to the Premiership the day after the French Presidential election.

"I OUGHT TO DIE NOW," said Clemenceau on Armistice day; "then at least, they would give me a funeral." But Clemenceau stayed on, as the New York *Tribune* notes, "saw France through the pitfalls of the Peace Conference," and won a series of parliamentary victories. These triumphs, as another American paper observes, were followed by the recent national elections which seemed to result in "such approval of Clemenceau by a whole people as few of his predecessors in high office have ever been complimented with." It looked to editors in France's sister Republic across the Atlantic as if Clemenceau could have "any honor he wanted merely for the asking." So his defeat for the Presidency by a man of whom most Americans knew nothing came as a distinct shock to our editors, who are led to comment freely on the proverbial ingratitude of republics, and who seem to feel that the choosing of a President is not one of the things they "do better in France." Clemenceau's defeat, says the New York *World*, "reflects no credit on France." We are reminded, however, that the French people do not vote for their President. He is elected by the joint secret ballot of the members of the Senate and Chamber of Deputies, who meet together for this purpose at Versailles every seven years, or whenever the office of President becomes vacant. Our own press, the newspaper correspondents in Paris, and a considerable portion of the French press, expected the election of Clemenceau. But in the legislative caucus held to nominate candidates on January 16, Paul Deschanel, President of the Chamber of Deputies, received 408 votes against Clemenceau's 389. The Premier at once withdrew his name, and in the formal balloting next day he received but 56 votes, while Deschanel was elected by a huge majority. The successful candidate received 734 out of a total of 889 votes cast, this being the largest majority received by any French President since the unanimous election of Thiers, the first President of the Third Republic. So, comments the Baltimore *Sun*, Clemenceau has not been rejected by the French people; "he has been turned down by a lot of politicians who control the two branches of the legislature, enemies he has made by his forthrightness and patriotism, defeatists, a good many of them, during the war." It is "petty politics," declares the Baltimore paper, which has withheld this somewhat ornamental but highly honorable office from the old statesman; "and whatever view right-minded individuals may have of him, they can only have contempt for them." "The Tiger," adds *The Sun*, is not the only war-ruler who has been repudiated in some fashion or other by his people or their representatives. As the Newark *News* specifies:

"Orlando of Italy is out, Clemenceau of France has been denied the Presidency, Lloyd George of England loses consistently in the by-elections, and the fight on the League of Nations in this country is ninety per cent. a fight on Wilson. Behind the actual fighting on the battle front these four men were most prominently identified with the winning of the war. But to-day most people seem to remember more clearly the irritations, the things they do not understand or know about, than the services and achievements of their leaders. Later on another generation will get the perspective better arranged."

The causes of Clemenceau's unexpected and dramatic defeat are set forth at some length in quotations from the Paris newspapers and press correspondents in another article in this issue. The New York *Times* is convinced that the proverbial ingratitude of republics played but little part. It sees no repudiation of Clemenceau's policy, no "sudden lurch toward Socialism," and it concludes that:

> "Mere petulance and personal antagonism probably played a large part in this unexpected decision of the caucus. The war is over, peace has been proclaimed, the nation is no longer in danger, and Senators and Deputies felt free to give play to their personal feelings; and, as may well be imagined, the sensibilities of a good many members of the Senate and of the Chamber must have been ruffled by 'The Tiger.' His is a tremendously strong personality, and that often makes for enmities; besides, he has commanded support by sheer moral and intellectual force rather than by the art of the politician. He has little time to waste in soft flatteries and propitiations. Many of those who took part in the caucus may simply have been tired of his dominance, of hearing it said always that Clemenceau was France."

But the failure to reach the Presidency detracts nothing from Clemenceau's fame, declare American editors in all parts of the country. "It will never be forgotten of him that he was the savior of his country," says the Philadelphia *Record*. The Brooklyn *Citizen* believes that he will remain "to countless generations of Frenchmen a true symbol of patriotism, a man whose sole thought is the glory of France." While "politics resumes its former sway in France," and Clemenceau's "day of popularity is over," the Dayton *News* holds that nevertheless his place in history is assured; "he has enjoyed the exalted privilege of saving France, which in itself is sufficient glory for any human being."

But there are editors who, while holding Clemenceau in the highest esteem, find little to regret in his favor to attain the Presidential office. Even the New York *World* doubts if "a man of his masterful character and unconquerable energy would have found himself at ease in that highly ornamental office"; and, it observes, in electing Deschanel the French National Assembly "renews the assurance that there shall arise no question as to where the power to govern shall remain under all conditions." Indeed, in the Washington *Post's* opinion—

> "Mr. Deschanel will be a better President than Mr. Clemenceau would have been, and this fact is creditable to both of them. The Presidency is not a place suitable to Mr. Clemenceau's temperament or method of obtaining results. Hence he would have been unhappy in that office, and his term would have been a failure. Mr. Deschanel, however, has proved by long service that he is peculiarly qualified to perform the duties of the Presidency—duties which may be of the highest importance, as was shown when President Poincaré, by his own motion, changed the course of history by choosing Mr. Clemenceau as President of the Council."

The Springfield *Republican* thinks it is well that Clemenceau is now eliminated from public life, for "France now needs forward-looking statesmen to whom 1870 is not an obsession." An Indiana paper, the Muncie *Press*, thinks it possible that tho the French people love "The Tiger" in war, "they may not wish such a character for their leader in time of peace; a warrior such as Clemenceau is at heart is seldom a good civil executive, because he is not properly constituted for the milder rôle." The Washington *Herald* is imprest by the persistent French fear of another "man on horseback" like the great Bonaparte and Napoleon III. In fact, it thinks, "the French fear themselves nearly as much as they fear a new-born Prussia." So—

> "Not French ingratitude, but French intelligence, destroyed the gathering snowball of 'The Tiger's' political ambitions. Not only Clemenceau, but also Foch must be kept within safe bounds, and France will save herself, even should she lose her greatest statesman and her greatest warrior."

THE NEXT PRESIDENT OF FRANCE,

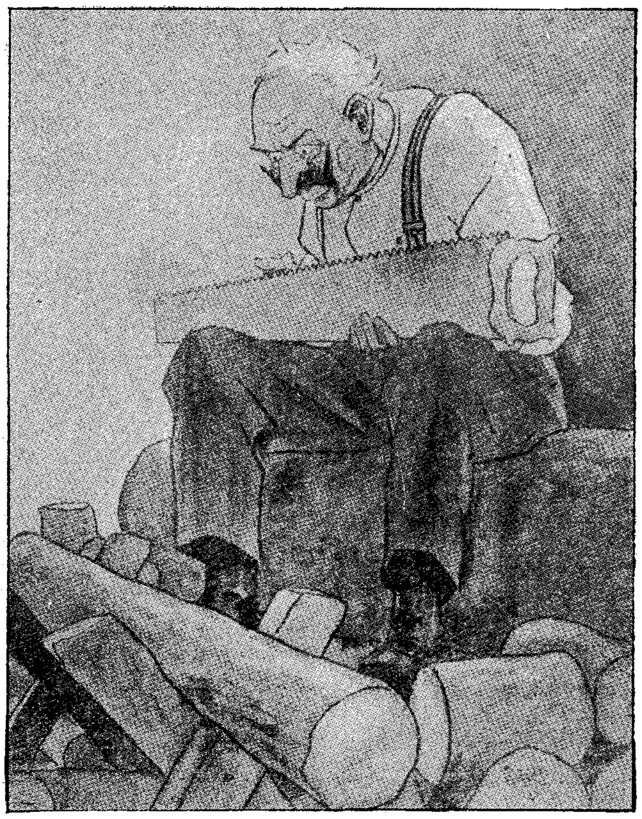
Paul Eugène Louis Deschanel, Academician, President of the French Chamber of Deputies 1898–1902, 1912–1920, who was elected President of France by the French National Assembly on January 17, to take office on February 18.

The new President of France, writes the Washington correspondent of the Socialist New York *Call*, "will not pursue the Clemenceau ambition to ursurp power and make the office the most potent in the republic. He will follow the French theory that parliament is supreme. His prime minister will dominate—with the consent of the Chamber."

The Socialist writer predicts that the new Millerand Ministry will be replaced shortly by one headed by Aristide Briand. Paris correspondents make the same prediction, and also note that the choice of Millerand was decided upon by an agreement of Clemenceau, President Poincaré, and the new President, who goes into office on February 18. According to a New York *Sun* correspondent, the Millerand Ministry has come into power "for the special purpose of national reconstruction." A *Times* correspondent thinks there will be no immediate change of French policy in foreign affairs. The personnel of the new French Cabinet is reported as follows in the dispatches:

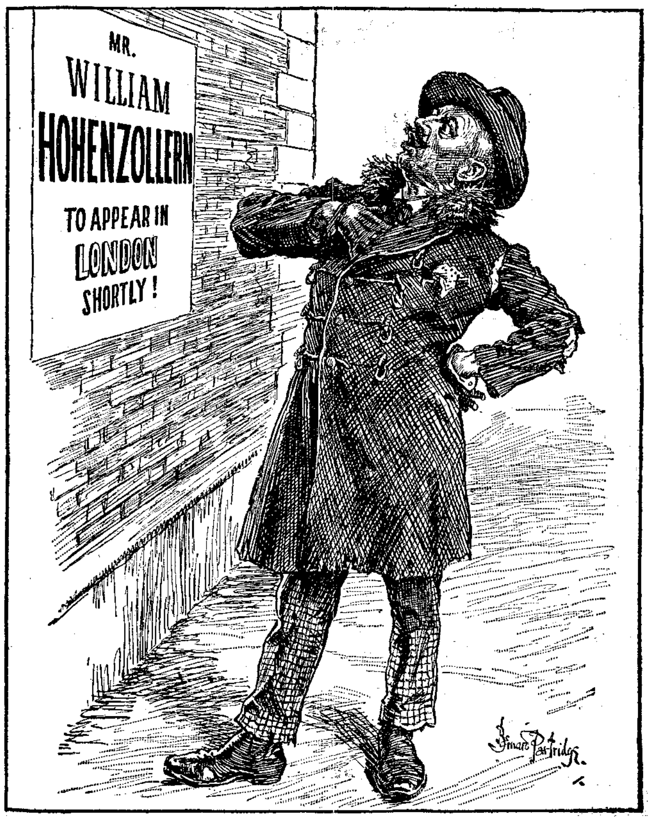
Premier and Foreign Minister—Alexandre Millerand.
Minister of Justice—Mr. l'Hopiteau.
Minister of the Interior—Jules Steeg.
Minister of War—André Lefèvre.
Minister of Marine—Mr. Landry.
Minister of Commerce—Mr. Isaac.
Minister of Agriculture—Henri Ricard.
Minister of Finance—Frédéric François-Marsal.
Minister of Liberated Regions—Jean B. E. Ogier.
Minister of Colonies—Albert Sarraut.
Minister of Public Works—Yves le Trocquer.
Minister of Public Instruction—André Honnorat.
Minister of Labor—Paul Jourdain.
Minister of Hygiene and Social Welfare—Mr. Breton.
Minister of Pensions—André Maqinot.

The new Premier is a lawyer of sixty, who became a Deputy in 1889, at once took high rank as an orator, served as Minister of Commerce and as Minister of War, and was restored to the latter position when the Viviani Cabinet was formed in August, 1914. Altho nominally a Socialist, he was attacked by Socialists and fell with the rest of the Ministry in 1915. He was appointed Governor of Alsace-Lorraine in March, 1919.



WILHELM (counting the teeth of the saw): "This year——Next year——Sometime——Never——"

—From the London *World.*



MR. WILLIAM HOHENZOLLERN TO APPEAR IN LONDON SHORTLY!

THE OLD ACTOR—"I'm afraid I'm past playing the hero; but it's something to know that I will have a star part as the villain."

—Partridge in *Punch* (London).

THE SEESAW OF DESTINY.

WHY WILLIAM OUGHT TO BE TRIED

A "DANGEROUSLY FOOLISH" MOVE, which will tend to make a martyr of William Hohenzollern in the minds of the German people and to rally them to a renewed support of the Hohenzollern family and the *Kultur* it represents is what the San Francisco *Chronicle* sees in the Allies' demand upon Holland to surrender him for trial. A Berlin dispatch quotes Herr von Gerlach, a Radical Democrat, as voicing the same warning in his statement that the trial "would strengthen the reactionary wave in Germany." And a Swiss correspondent reports that former King Ludwig of Bavaria, on learning of the demand for William's extradition, "broke out into a furious temper, condemning the act of the Allies as impertinent and impudent." But there are others who agree with Mr. Clemenceau that the trial of the Kaiser as principal author of the world-war "is claimed by the voices of millions of victims."

AMERICAN JURISTS SENTENCE THE KAISER—Next week we shall publish an article giving the views of hundreds of judges and professors of law in all parts of the United States, who tell frankly what punishment should be given William II. if he is tried and found guilty. This article will be accompanied by a full-page cartoon in colors depicting William standing at the bar of justice haunted by the memories of his crimes. This article has been months in preparation and is of supreme interest and significance, and those who usually buy this magazine at the news-stands should have their copies reserved if they wish to be sure of it.

The demand upon Holland is made in accordance with Article 227 of the Treaty of Versailles, which arraigns the former Emperor "for a supreme offense against international morality and the sanctity of treaties," and announces that his surrender by the Government of the Netherlands will be requested in order that he may be put on trial before a "special tribunal" composed of five judges representing the United States, Great Britain, France, Italy, and Japan.

"There is almost universal satisfaction with the renewed purpose shown by the Allies to bring the Kaiser to trial," thinks the Tacoma *News-Tribune*, which adds, however, that "the trial itself is of more importance than the personal fate of the defendant." For—

"It is a procedure intended to set history straight. The verdict of that international court, and the evidence on which it is based, will stand forever as an arraignment of autocracy, a lesson alike to ambitious rulers and to people who put irresponsible power in their hands."

"It is essential to the right settlement of the moral issue of the war that the military victory of 1918 should be followed by the production of such evidence as exists regarding the personal guilt of those who caused the war," declares the New York *Globe*. Nor is this all, it continues:

> "There should be, once for all, a refutation of the heresy that the acts of nations are morally distinct from the acts of the leaders of nations; that there is one moral law for men and another for governments; that states, personified, may justly commit acts which in individuals are criminal. Even more important than any machinery of international justice is the establishment of the principle that there is but one moral law, binding nations exactly as it binds individuals. A statesman who wantonly provokes a war commits murder."

The Kaiser ought to be removed from Holland, where he is "only a two hours' run by rail from the German border," says the Minneapolis *Tribune*, which regards his proximity to his former empire as a constant incentive to counter-revolutionary activity on the part of Prussian royalists. As to his guilt, this paper remarks:

> "Concerning the responsibility of the Kaiser in driving Austria into the Serbian War, there is no longer good reason for the slightest doubt. The decoded cipher messages of the Austrian ambassador at Berlin, the minutes of the historic meeting of the Austrian Cabinet, the confessions of Berchtold, the papers in the German archives recently brought to light by Kautsky, all prove that the Kaiser exercised to the maximum his personal initiative in forcing that war. The Allies would have no trouble in making their case."

A COSTLY STRIKE FAILURE

"BILLIONS OF DOLLARS, before the last accounting has been struck," says the New York *Sun*, "will have been lost" because of the steel strike, officially declared at an end by the chairman of the national committee, John Fitzpatrick, on January 18. The Boston *Herald* informs us that "it is reckoned to have cost in workmen's wages in the Pittsburg district alone $48,000,000, and the additional losses in the fifteen districts outside of that city are calculated at $39,000,000." "It was a costly experience," agrees *The Review* (New York), "nor did the loss and inconvenience stop with the manufacturers and immediate consumers of steel." What is called a "direct steel tonnage loss" is brought to our attention by *The Sun*, which says of this loss and other possible consequences of the steel strike:

"There was the loss to the railroads not only in freights from the steel-plants but in freights from general mills and factories which, failing to get their steel supplies, could not maintain their own production and fulfil their own deliveries. There was the loss of wages in such mills and factories due to that failure to get their material on which their wage-earners could work. There was the loss in such communities to trade folk whose customers thus had their spending power reduced by the steel strike."

No newspaper that we have examined has mentioned any profits to offset these so-called losses, so it is assumed that there have been little or no gains, except as set forth in editorials on the final outcome, to both sides in the way of experience. In explanation of the figures just mentioned, the New York *Commercial* offers the following:

"The wages that were unearned remain in the coffers of the steel companies. They represent loss in any economic sense in that they have caused deprivation and suffering and have not been used as an investment by the steel companies for the earning of other dollars. The sum thus represented has lain idle instead of being placed in circulation, so that the grocer, the butcher, and retailers generally may in turn have been able to increase their earnings. They have reduced the demand by just so much for manufactured articles, thus depriving other labor, theoretically at least, of additional earnings.

"The loss in tonnage is likewise measured in dollars, because it is estimated that had it not been for the strike steel of that estimated value would have been produced, yet the lack of this steel will be reflected in a curtailed production of industry that will spread itself throughout the year. Hence, this loss of production of steel tonnage begins at once to widen until the loss eventually could be figured in the billions."

TOPICS IN BRIEF

THE peak of high prices looks more like a tableland.—*Boston Herald.*

PERSONALLY we are willing to loan our last red to Europe.—*Philadelphia Public Ledger.*

THE only cheap thing these days is the life of an American in Mexico.—*Philadelphia Press.*

RISING prices have evidently adopted that skip-stop system.—*Greenville (S. C.) Piedmont.*

MR. WILSON stands not only for the uncrossed "t" but the uncrossed "I."—*Wall Street Journal.*

THAT Mexican earthquake did not take full advantage of its opportunities.—*Los Angeles Times.*

IT is reported that Clemenceau is to be married. That man can not accustom himself to a state of peace.—*Columbia Record.*

SIR OLIVER LODGE will find numbers of people in this country anxious to commune with departed spirits.—*Greenville (S. C.) Piedmont.*

ALL will be forgiven if Europe will ship over a few thousand willing houseworkers in place of the deported "Reds."—*Chicago Daily News.*

NO one can ever doubt the miracles who sees the minister living on his salary fixt ten years ago, and keeping out of debt.—*Universalist Leader.*

NOTHING makes the Republicans madder than to have the President change his mind, except to have him refuse to change his mind.—*Greenboro News.*

THE learned preachers who declare that the world is losing faith should consider the number of hair-restorers on the market.—*Boston Shoe and Leather Reporter.*

NO doubt it would help Mr. Hoover's young boom if he would find something for housewives to do with all those food-substitutes which have been cluttering up the basement and attic since he sold them broadcast two years ago.—*Kansas City Times.*

AMERICA is now in for a dry cleaning.—*Baltimore American.*

PLUMB is still planning, but his plans are out of plumb.—*Greenville (S. C.) Piedmont.*

THE parlor Bolsheviki should be taken to the woodshed.—*Boston Shoe and Leather Reporter.*

THEY'RE calling passenger-liners between New York and Cuba tank-ships.—*New York World.*

HISTORY does repeat itself. Dempsey will not go to France to fight.—*Greenville (S. C.) Piedmont.*

THE bee does not live long, except the one Bryan has had for twenty-four years.—*Greenville (S. C.) Piedmont.*

STILL, why get excited if the German Government is overturned? It is the same on both sides.—*Chicago Daily News.*

IT must be true as reported that jazz is dying. There is no other way to account for the weird noise it makes.—*Toledo Blade.*

THE way Holland hangs on to the Kaiser is another proof that there is no accounting for tastes.—*Boston Shoe and Leather Reporter.*

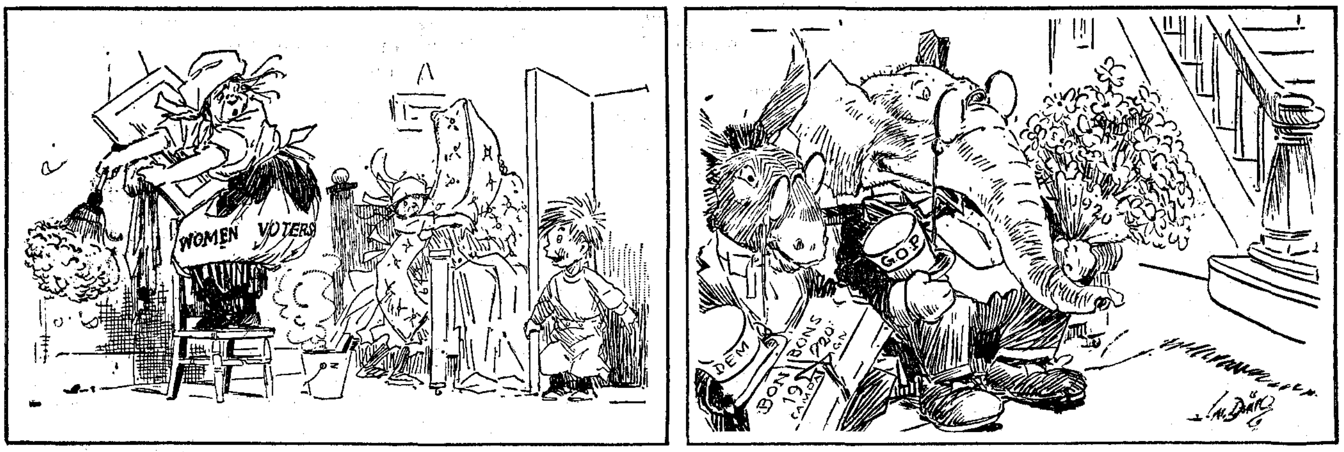
THE Indians once owned this country, but since they became reservationists just look what has happened to them.—*Columbia Record.*

HOLLAND still objects to exporting the biggest cheese ever held within its borders. Yet the Allies may insist upon it.—*Philadelphia Record.*

IF all the candidates for the G. O. P. nomination go to the convention there won't be any room in the hall for the delegates.—*New York World.*

HOOD RIVER, the famous apple district of Oregon, reports a red, white, and blue lizard. How long does it take cider to ferment, anyhow?—*Seattle Argus.*

SENATOR UNDERWOOD has withdrawn as a candidate for the Democratic nomination. One beauty of withdrawing now, candidates are recognizing, is that they don't have far to withdraw.—*Kansas City Star.*



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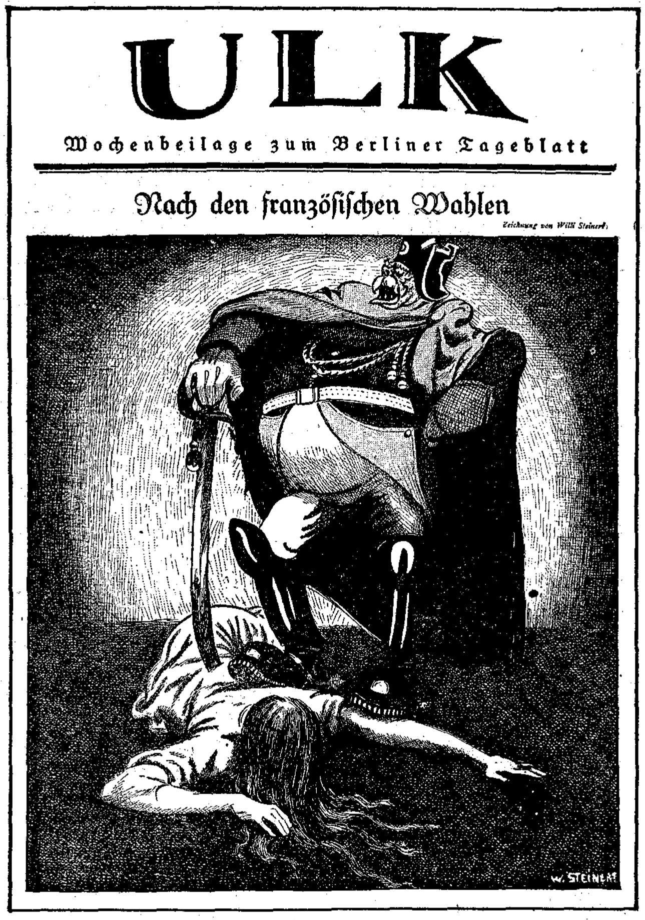
"THERE'S A COUPLE OF DISTINGUISHED GENTLEMEN TO SEE YOU, MA."

—Darling in the New York *Tribune.*

FOREIGN - COMMENT

FRANCE DEFEATS CLEMENCEAU


ULK
Wochenbeilage zum Berliner Tageblatt
Nach den franzöſiſchen Wahlen
Zeichnung von Willi Steinert
W. STEINERT

CLEMENCEAU IN GERMAN EYES.
—*Ulk* (Berlin).

GERMANY COULD NOT BEAT CLEMENCEAU, on whom his countrymen bestowed the affectionate cognomen of "Father Victory," but France herself defeated him when the political forces of the Senate and Chamber of Deputies preferred Paul Deschanel, President of the Chamber, as President of the Republic. This is the bitter conclusion of some French political observers, which finds echo in much press comment outside France. The bulk of French opinion falls into two divisions, which are identified as follows in Paris dispatches. "Premier Clemenceau has been victorious against many attacks in the Chamber and Senate in the last two years," said one Senator, who opposed the Premier. "This was because he was fighting for France. When he seeks personal honors, however, he goes down to defeat." On the other hand, supporters of Mr. Clemenceau said when the Premier's defeat in the caucus for the nomination was made known: "Berlin will illuminate to-night." That Germany has lost her implacable foe in the retirement of Clemenceau is frequently noted in Paris dispatches, and more particularly significant is the rumor in a Paris dispatch to an American-German Socialist newspaper that the case of the French Government against Joseph Caillaux on the charge of treason now assumes an entirely new outlook. This daily reports that it has been often rumored in French circles for months past that in case of the overthrow of Clemenceau, Caillaux would never be sentenced to death. The chagrin exprest over the setback suffered by ex-Premier Clemenceau, we are reminded, must not be taken as in derogation of the accomplishments of President-elect Deschanel and of his impeccability of character. The fact is, according to Paris dispatches, France would like to approve of the politicians' choice of Deschanel, but she finds it hard to praise the defeat of Clemenceau. As for "The Tiger," it is said that his resignation as Premier together with that of his Cabinet is a sign that he is "through" with politics. On the other hand, some editors with long memories recall that on several occasions in his remarkably extensive career, "The Tiger" has previously been supposed to be "through." Mr. Clemenceau's statement to the Havas Agency expresses his stand in his usual forthright and vigorous manner, as follows:

> "I did not ask anything. I did not want to be a candidate. I was told it was my duty, that the situation was difficult, that the country expected new services from me. I believed it, but I needed the general consent, which failed.
>
> "I figure that my part is ended. I have no bad feelings toward anybody. I have no reason to be angry. I have taken my responsibilities. What more can one ask than that others assume theirs?"

As the Paris *Figaro* sees the new turn in French politics, the parliamentary government of France, "after having been imbued with heroism by Clemenceau, now returns to its habitual frame of mind and resumes its jogging pace." The Premier lost the battle for the Presidency, we are advised by various Paris correspondents, because he was too strong in personality and methods. Deschanel had no positive program and the platform on which he was elected was "to beat Clemenceau—that and nothing more." Among various arguments brought against Clemenceau as President were his age, the fact that he is not of the courtier type, and also, his vigorous opposition to Bolshevism. Then, a proportion of voters was influenced by dissatisfaction with the new taxes and by disappointment over the Treaty provisions, but the capstone of all opposition to Clemenceau, it was repeated, is that he is too forceful a man to put in the Elysée Palace, and that his force would curtail the powers of Parliament. As one Paris correspondent writes:

> "To understand the force of the argument that Clemenceau's strength carried, it must be borne in mind that Parliament can always reprimand the head of the Government when he is Premier by refusing a vote of confidence. That gives Parliament control of the situation. But with a forceful head of the Government in the Elysée, with a seven-year lease on the job, Parliament could not control the situation.
>
> "In the past the President has, as Capus says, 'jogged along.' It was the Premier who ran the Government, and Senators and Deputies could always take the Premier to task or throw him out. But with Clemenceau as President he would be boss, for not only would Clemenceau have been his natural forceful self in the Elysée, but he entertained very strong opinions in the direction that the President of France should be, as the President of the United States, directing head of the Government. And he had said as much.
>
> "As long as he might have remained in the Elysée he would have been boss. Now the decision was in the hands of Senators and Deputies who are for the most part professional politicians, and who did not wish any such change. They wanted a President who, like Poincaré and most of his predecessors, would make pretty, innocuous speeches, pin decorations on deserving folk, kiss distinguished cheeks, and pick a new Premier whenever the politicians wanted a change of government.
>
> "Deschanel is an estimable man. He is a brilliant writer. He is a statesman of experience in internal affairs of France and a student of foreign affairs. He is an Academician. He is polished and accomplished and distinguished. But he is a different sort of a man from Clemenceau. He conforms better to

BOLSHEVIK WAY WITH THE PRESS

BOLSHEVISM'S THOROUGH METHOD is significantly revealed in its policy of "reconstructing" the press to meet the needs of the Bolshevik state. This "reconstruction" apparently means simply the complete suppression of all publications inimical to Bolshevik plans and ideas. In all Russia now, we are informed by a writer in the *Varschavskaya Ryetch* (Warsaw), there are only two or three underground organs which are anti-Bolshevik in principle. That they can not hope for a wide circulation is apparent when one recalls that merely for picking up a proclamation or message dropt from an airplane a person is liable to be shot on sight. This informant tells us further that—

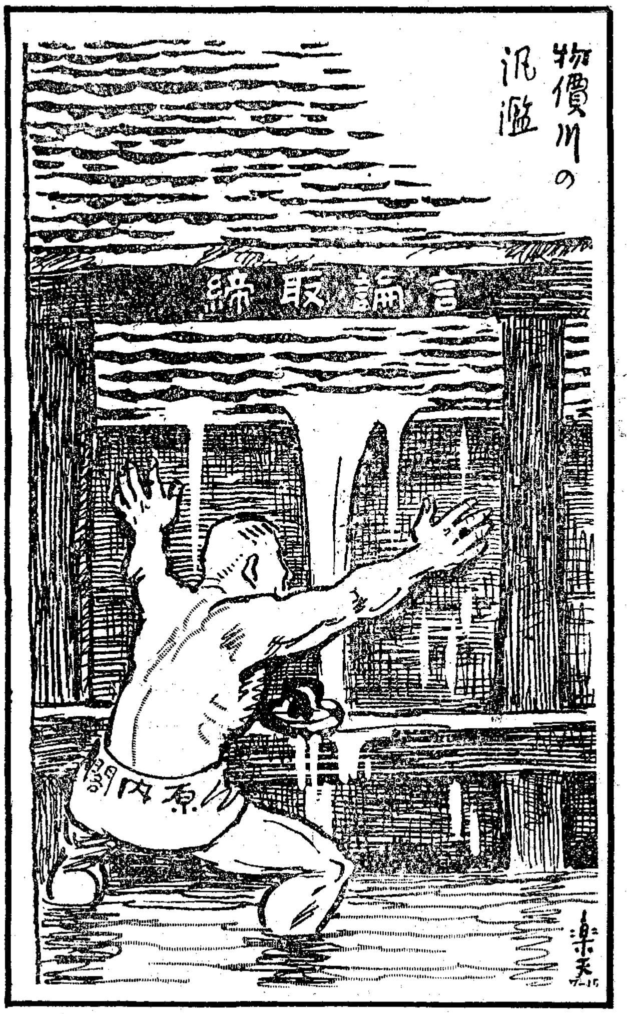
> "The entire press in *Sovietdom* is in the hands of the Bolsheviki. They announce proudly that they know the people and the people know them. But they are striving in vain to commune with the people through the medium of the newspapers. Their efforts are manifest in solicitations that their readers write letters telling of their life and needs, and in some newspapers special columns are devoted to such correspondence. However, only communists and sympathizers write to the editors, and their letters usually serve for venting the writers' wrath in matters of personal concern. Yet even in these letters one glimpses a picture of life in *Soviet* Russia which is so terrible that papers outside the country, such as Bourtzev's *Obshcheye Dyelo* ('Common Cause,' Paris), reprint them as evidence of the disintegration and approaching collapse of Bolshevism."

Not all readers can understand the *Soviet* press, we are told, for the meaning in a great many cases is obscured by the lavish and miscellaneous use of foreign words and phrases, so that to the Russian peasant the Bolshevik press is practically unintelligible. Another peculiarity of the *Soviet* press in Russia is its mendacity:

> "Military successes of the Bolsheviki are exaggerated, while reverses are minimized or ignored. For instance, not a single word appeared in any *Soviet* papers about the attempt on the lives of the Moscow commissaries. Altho there is no official censorship as such, there is one in fact. Literary magazines are rare in *Soviet* Russia, and magazines of particular fields are non-existent. There are four or five monthly publications which drag on a miserable existence, without illustrations and appearing only at irregular intervals. In Moscow there are two humorous publications *Proletaryi* ('The Proletarian') and the *Beech* ('Whip'); both are filled with profanity, which is palmed off as humor. . . . To the honor of former Russia's journalistic profession, be it said, few practitioners have gone over to the *Soviet* camp. Russian journalists are starving in their unheated houses and gradually dying from hunger, cold, and exhaustion. They have lost all outward resemblance to human beings, but they will die ere they surrender. The best traditions of Russian journalism are a living flame in the hearts of these heroes. In Petrograd and Moscow a union of journalists has been formed to enable the members to obtain means of livelihood. Public dining-rooms and other philanthropic works are conducted in behalf of the journalistic fraternity."

JAPAN TIRING OF WAR IN SIBERIA

DEATH AND TAXES are said to be the only certainties in this changing world, but the Japanese are beginning to feel that the interminable war with the Bolsheviki in Siberia is producing nothing else. All fears of Japanese "aggression" in Siberia would be greatly allayed, according to some journals, if there were sufficient understanding outside Japan of the strength of feeling among the Japanese people and in non-militarist circles against Japan's further plunging in the Siberian enterprise. This opposition, we learn from Tokyo dispatches, has been stimulated by the decision of the American Government to withdraw its expeditionary forces from Siberia. America's move was entirely unexpected by Japan, we read, and embarrassed greatly the Hara Ministry at Tokyo, which has been under fire for some time on account of its Siberian policy. No expedition has been "more unpopular with the Japanese nation," says the Kobe *Japan Chronicle*, and it is "popularly recognized to have been a failure." The cost of maintenance is said to have been $100,000,000 a year; and to carry on the work single-handed, it is estimated Japan would have to spend more than $200,000,000 a year at least. To meet the expected strength of the Bolsheviki in eastern Siberia when their positions in western Siberia shall have been consolidated and their lines of communication established, the cost, we learn from the press, would probably total $500,000,000 a year. A strong Japanese opponent to the dispatch of additional troops or even relief troops to Siberia, is the Tokyo *Jiji*, which says:


物價川の氾濫
言論取締
原内閣
楽天

PLIGHT OF JAPAN'S PREMIER.

Lock-keeper Hara can not stop the flow of press comment against the Siberian enterprise.

—*Jiji* (Tokyo).

> "Additional troops should not be dispatched even when the question is considered from the view-point of the necessity of maintaining cooperation with the Allies and of the present state of affairs in Russia. In addition due consideration should be given to the sentiment of the people. It is clear that the object of the Japanese expedition to Siberia was to assist the Czecho-Slovaks. This object was attained long ago, yet the Japanese soldiers are still being maintained in Siberia. The people are simply told that the presence of Japanese troops is required by the necessity of maintaining order, but the people do not fully understand the reason. Official dispatches tell of the occurrence of serious casualties among the Japanese troops, and also of many deaths from disease. Japanese soldiers are loyal and are prepared to lay down their lives for the sake of the state; in fact, their devotion to duty is exemplified by the fact they often attacked an overwhelmingly superior force of Bolsheviki at the risk of being annihilated. But what about the feeling of the relatives of the fallen officers and men? If the people do not fully understand for what purpose their sons, husbands, or fathers are killed, their sense of duty to the state may be shaken, and it is not impossible that such a state of affairs may lead to serious consequences in an emergency of real importance to the state."

Furthermore, if Japan sent an additional body of troops to Siberia, it would make the Powers "suspect Japan of territorial ambitions," adds the *Jiji*, which believes that the Bolshevik advance must be checked in order to prevent the spread of their ideas, but "as ideas are not propagated by force, so they must be met otherwise than by force." This journal proceeds:

> "Besides, while the Bolsheviki are not capable of fully organizing Russia under their sway, yet they are in the ascendency for the time being, and so to fight them would practically mean to make an enemy of Russia—an event which is very undesirable. Moreover, however rigorous the discipline of the Japanese Army may be, it would be dangerous to leave many of them in Siberia and give the Bolsheviki opportunities for coming into contact with them and propagating their ideas among them. Even now, the Japanese nation does not understand why troops have been sent to Siberia, and the friends and relations of those who were killed or wounded there are lamenting over the losses as so many lives thrown away. This feeling will be intensified should more troops be sent to give rise to more casualties to no purpose, as it is believed it would, and, in consequence, the nation's sense of duty involved in the military service may be shaken. From this consideration, not only is it unnecessary to increase or replenish the troops in Siberia, but they should be reduced to the smallest possible minimum to be stationed at suitable points in order to keep guard against the Bolsheviki lest they should threaten the borders of the Empire unawares."

The Tokyo *Kokumin* says that the chaos in Siberia is due to disputes between Kolchak and the Social Revolutionaries, and the "so-called Bolsheviki are merely vagabond thieves," wherefore this journal believes "Japan would better protect Japanese interests only and leave Russia's rehabilitation to the Russians." The *Kokumin* observes, moreover, that—

> "It is obviously a delusion to ascribe the difficulty of maintaining order in Siberia to the smallness of the number of Japanese troops. The Government must be aware that however many soldiers may be sent in so far as is compatible with the financial strength of the country, their number will not be sufficient to preserve peace and order even in only three eastern provinces of Siberia. If the reasons for the dispatch of additional troops are to be upheld, the number to be sent should be sufficiently large to drive the 'Reds' from the whole of Siberia; indeed, if perfect order is to be maintained in Siberia, the Russian Bolsheviki should be exterminated. Has Japan the military and financial strength necessary for undertaking that task? Even if she has, is it possible under the present condition of international relations?
>
> "It is understood that General Tanaka, the War Minister, stands alone for the dispatch of additional troops, all the other members of the Cabinet being against it. The only way to solve the question is for the Government to establish a fundamental policy toward Russia."

The Tokyo *Yomiuri* is among the journals which believe that the question of reenforcing or replacing troops in Siberia must be decided with reference to the "fundamental Russian policy, which must be based on a policy adopted by the Powers in common." The fundamental policy of the Allies toward Russia is undergoing a change, the *Yomiuri* notes, but Japan's military authorities seem to be deciding on the dispatch of more troops to Siberia without any regard to the intentions of the Allies, but merely in anticipation of the eastward advance of the Bolsheviki. The *Yomiuri* continues:

> "This can only mean that they want to have the country act on a policy of her own separately from the Allies. Now that Britain and France are inclined to discuss peace with Russia, such a course will place Japan in an isolated position in her dealings with Russia. In this light the question with which Japan is now confronted is not merely whether more troops should be sent to Siberia or not, but whether she should or should not act in concert with the Allies. . . . Japan should act in concert with the Allies in future as she has done in the past."

The Tokyo *Yamato*, which interprets the view of the militarists and expansionists, has no hesitation in affirming that Japan can not act in the same manner as the other Powers, but must "make herself responsible for the maintenance of order in eastern Siberia, at least." This is the invariable policy of the Empire, and unless it is to be abandoned, the evacuation of Siberia is entirely out of the question. The Japanese force in eastern Siberia must be replenished, according to this journal, or even "reenforced to such an extent as may be adequate to accomplish the object in view." The *Yamato* says further:

> "The Japanese expedition to Siberia has not been sent for the exclusive purpose of helping the Czecho-Slovaks: it was also with the object of keeping the peace in eastern Siberia. It is for this purpose that Japan has given aid to all anti-Bolshevik leaders—Kolchak, Horvath, Semenoff, etc. Should the Empire vacate Siberia, what will become of Siberia? Britain and France still regard the Bolsheviki as an enemy, but their internal troubles and financial conditions make it difficult for them to send troops to Russia or even to help the anti-Bolsheviki with goods. This is why they have come to the decision that Russian affairs should be left for the Russians to decide. And this they can afford to do, because even tho the influence of the Bolsheviki may spread, Britain and France will not be directly affected, as there are the intervening countries of Courland, Poland, Germany, Austria, etc.
>
> "Not so with this country. Korea, which is our territory, Manchuria and Mongolia which are our sphere of influence, and China, which is in a relation of mutual dependence with us, are all contiguous with Siberia and immediately exposed to the poisonous influence of the Bolsheviki. Besides, the disturbance in Siberia will at once imperil the first line of Japan's national defense, and is sure to be followed by a disturbance in Korea and Manchuria and Mongolia."

DISAPPOINTMENT OF HINDU - HOME - RULERS—King George, in his proclamation announcing the measure giving India a larger measure of self-government, expresses the hope and wish that his people and his officers "work together for the common purpose," in the new era that is opening. But there is small trace of cooperative spirit in the unrestrained dissatisfaction voiced by uncompromising Indian Home-Rulers. Their objections to the new legislation are set down by Mr. S. Satyamurti in the Socialist London *Daily Herald* as follows:

> "1. Because it enfranchises only 1.5 per cent. of the population on a property basis, and women and labor do not get votes as such.
>
> "2. Because it sets up second chambers largely representative of the vested interests and far more reactionary than the House of Lords, with official and nominated majorities for the purpose expressly of thwarting the popular will.
>
> "3. Because the power of the purse, with unimportant exceptions, is still vested in the hands of an irresponsible bureaucracy.
>
> "4. Because it introduces into the Indian Government the system of diarchy, unheard of in history, unsupported by any precedent and unsupportable on any theory of constitutional government.

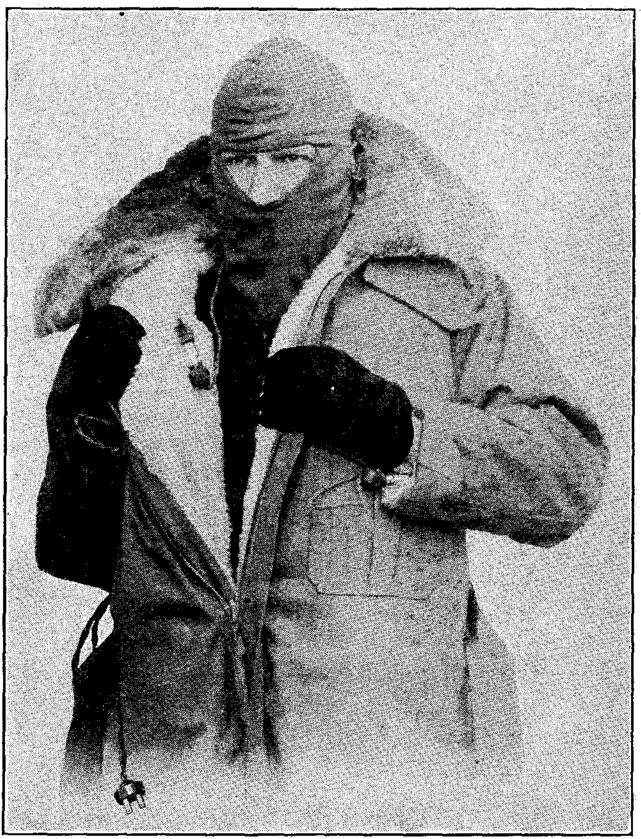
The new measure, which has been described in England as one of "the stages of the surrender of her trusteeship to a well-qualified Indian Government," is designed gradually "to replace the system of bureaucratic administration with a system of representative government in which the representatives of the Indian electors will not only initiate policy and legislate, but will also control the officials charged with the task of carrying out that policy." The responsibilities of the legislative ministers cover such questions as education, sanitation, etc.; while questions of peace, law, order, and revenue are entrusted to the executive government. Of the legislative members of the diarchy we read:

> "Ministers who enjoy the confidence of a majority in their legislative council will be given the fullest opportunity of managing that field of government which is entrusted to their care. In their work they will be assisted and guided by the Governor, who will accept their advice and promote their policy whenever possible. If he finds himself compelled to act against their advice, it will only be in circumstances roughly analogous to those in which he has to override his executive council—circumstances which will be indicated in the Instrument of Instructions furnished to him on his appointment by his Majesty. On the other hand, in and for that field of government in which Parliament continues to hold him responsible the provincial governing council will remain equipped with the sure and certain power of fulfilling that responsibility."

SCIENCE - AND - INVENTION

HOT CLOTHES FOR AVIATORS

THE FLIER'S GARB will be "warm" hereafter, not only in the sense of excluding the cold, but in that of being itself an active source of heat. The aviator, drest for flight, will be a walking stove, for almost every part of his dress—coat, helmet, gloves, and socks—will be heated electrically in its very fabric. As the art of flying develops, says the writer of an article in *The Aerial Age Weekly* (New York, January 5), it is reasonable to suppose that such electrically heated clothing will become standard equipment for most airplanes. No matter how the mechanical and aerodynamical problems are solved and the airplane perfected, there will always be need for protecting the aviator and his passengers from the cold at high altitudes. The standard electrically heated suit as supplied to the United States Government includes a rubberized moleskin coat lined with lamb's wool, an electrically-heated helmet-lining of silk jersey, and similar linings for moccasins and gloves. Over the helmet lining the aviator straps his leather helmet; over the electrically heated gloves he places his leather gauntlets, while his feet are protected by moccasins over the electrically heated socks. We quote and condense further:



Illustrations by courtesy of "The Aerial Age Weekly," New York.

"THE AVIATOR WILL BE A WALKING STOVE."

Aviator's suit, showing connections and cables for electrically heating the helmet, gloves, and moccasins.

"To heat the suit, the plane is equipped with an air-driven generator, fitted with a small propeller, which insures current even should the engine fail to function. At a convenient point in each suit is a miniature switch, by means of which the flier can control the heat in any part of his outfit.

"A complete outfit of electrically heated aviator's clothing, as specified by the Bureau of Aircraft Production, consists of a wired harness assembled in a one-piece suit, and electrically heated garments as follows: One helmet, one pair of moccasins, and one pair of gloves.

"Each electrically heated garment consists of an inner and an outer shell of denier Jap filature silk. The heating element, mounted on a cotton cloth backer, is enclosed between the aforesaid outer and inner cases. The backer containing the heating unit is securely sewed to the inner lining of each garment, with the resistance wire adjacent to the outer lining. All edges are securely sewed in such a manner as to prevent any possibility of raveling.

"The electrically heated gloves consist of an inner and outer silk glove, the heating unit being inserted between the inner and outer gloves. The inner gloves are of various sizes as desired.

"Gloves are sewed in seams without silking on the back. They are seamed with silk throughout and made with fourchettes and double-tipped fingers and thumbs. The thumbs are sewed into the gloves with two rows of stitching.

"The gloves are flexible in all directions, neat in appearance, and comfortable. They are provided with an attaching cord and terminal connectors.

"The heating elements are attached to the gloves at the back of the hand and the back of each finger and thumb up to the base of the nails. They are so placed that they will distribute their heat uniformly over the back of the hand and fingers without interfering with the operator's sense of touch. The conductors are securely stitched in position, and each glove is wired so that there will be a minimum potential difference between adjacent slopes.

"Care is taken to insure that the gloves are thin enough to allow their being worn as a lining in other gloves and are constructed so that the knuckles will not be chafed when the hand is bent.

"The moccasins are made of silk as used for gloves. They are neat in appearance and comfortable to wear. They measure not less than six inches high at the back of the heel. Each moccasin is provided with an attaching cord with terminal connections.

"The heating unit is inserted between the inner and outer fabric. It distributes the heat around the sides of the foot, near the sole, over the toes, and round the ankle, the principal distribution of the heat being around the sides of the feet.

"The helmet consists of an outer and inner shell of silk. It is made to fit neatly over the head. The quality weave and weight of the silk are similar to that used for the gloves.

"From top to bottom the helmet measures not less than thirteen inches at the back and not less than sixteen inches at the front. An opening is provided to expose the eyes, nose, and mouth. The helmet in no way interferes with the sidewise vision of the aviator. Round holes one and one-half inches in diameter are provided for ears.

"The heating element is placed between the inner lining and the outer shell. It distributes the heat in the zone across the forehead, just above the eyes, down each cheek, over the chin, around each ear, and across the back of the neck."

Each helmet, glove, and moccasin, the writer goes on to say, has a flexible lead with a terminal having a pair of male connectors. Terminals of heating elements are soldered to leading-in wires, which are of flexible cable insulated with double wrap of impregnated silk and one braid. To quote further:

"The terminal at the left front of the suit for the helmet, at the end of each sleeve for the gloves, and at the bottom of each leg for the moccasins, is a substantial approved construction to withstand rough usage in service and of a type that does not permit short-circuiting in the terminal.

"Connectors of the Carr-fastener type are provided to connect the garment to the wiring in the suit. The connectors are mounted in pairs and all pairs have the same distance between centers. All fasteners in each garment are of the same size and design and of a type which insures positive electrical connections.

"Provision is made to insure against any strain between the wire and its attached snap when the terminals are disconnected. This is accomplished by the use of a stout terminal piece whereupon the snap-fasteners are mounted. Its design is such as to permit of its being grasped by the wearer in order to connect or disconnect the unit.

"The manufacturer of the heating elements furnishes the necessary harness to be inserted between the outer fabric and the lining of the aviator's suit to carry the electric current to the various elements. The harness may be installed in the suits by the manufacturer of the heating elements. All heating units are connected in parallel and not in series.

"The wires are stranded copper twin-conductors well insulated but flexible. They are joined at the center of the back just below the wearer's neck, from which point one is carried directly down to the right leg and terminates in a connector located within the trouser-leg approximately one inch from the bottom and on the outer side. Another pair of wires are carried down on the left leg and terminate in a similar manner. Other pairs of wires are carried down each sleeve and terminate in connectors at the wrist below the fur lining. Another pair of wires are carried over the left shoulder and terminate in a pair of connectors located on the outside of the left front. Sufficient slack is allowed in all wires so that they are not strained by the movements of the aviator. The wires are encased in a substantial cloth tubing; a one-quarter inch selvage is allowed on each side of the wire to be used in attaching the wires to the clothing.

ELECTRICALLY HEATED GLOVE AND MOCCASIN.

Heat in the glove is distributed uniformly over the back of the hand and fingers. In the moccasin, heat is distributed around sides of foot, near the sole, over the toes, and around the ankle.

"The wire harness is assembled in the suit between the outer shell and the lining, and is sewed to the outer shell by stitching along both edges, for which one-quarter inch selvage is allowed. The harness is securely anchored to the suit at the points where the connectors are located, thus relieving all strain on the terminals when disconnecting the clothing from the harness. All connectors are firmly attached to the suit so as to prevent the strain on same from being transmitted to the wires.

"The cable is brought out of the suit at the right side, one inch above the belt, and anchored at that point, in such a manner as to prevent a strain on the cable ripping the cloth.

"The accompanying illustrations were supplied by the Edison Electric Appliance Company, which has the distinction of having developed for the United States Army and Navy much of the standard aviator's heating equipment now in use."

OPENING NEW ORLEANS'S BACK DOOR

A TWENTY-MILLION-DOLLAR industrial canal, now nearly completed, is to connect New Orleans with the Gulf through Lake Pontchartrain, making unnecessary the hundred-mile trip down the Mississippi and through the Eads jetties. The construction of this ship-canal, with its "inner harbor," we are told by Thomas Ewing Dabney, of New Orleans, writing in *The Manufacturers' Record* (Baltimore), was begun on June 6, 1918, but has been delayed by the war. The great lock will not be finished for about a year, but except at four places, where bridges are being built, and from the lock to the Mississippi River, which will be the last work done, the canal itself has been pushed all the way through to a depth of twenty-six feet. Writes Mr. Dabney:

"It is only a question of days now when these bridges will be completed and the great dredges are able to push through the slender barriers of dirt under them, giving New Orleans the six-mile stretch of industrial sites, served on both banks by the Public Belt Railroad, furnishing fixt level facilities for river and ocean trade, giving cheap water connection with the coal-fields of Alabama and putting New Orleans forty miles closer to the sea.

"The Industrial Canal has cost twelve million dollars already, and it will probably cost seven million five hundred thousand dollars more before the first ship finally swims from the Mississippi to Lake Pontchartrain, thereby fulfilling the dream of the founders of this country. . . . . . .

"The lock is the key to the situation. Here greater difficulties were encountered than at the building of the Panama Canal, according to George M. Wells, of the Goethals Engineering Company, and General Goethals' right-hand man when that inter-oceanic thoroughfare was driven. The Goethals Company has supervision of the work. Unending quicksands were met; furthermore, a marsh-gas pressure developed which constantly threatened to blow up the entire bottom of the excavation. The quicksands danger was met by huge frameworks, and the pressure was overcome by partly flooding the lock and driving ten-inch artesian wells to relieve the pressure. All concrete work is being laid under water.

"The over-all length of the lock will be eleven hundred feet. The inside dimensions will be seventy-five feet wide and six hundred feet long, with a minimum depth of thirty feet of water over the sill—accommodation for the ten-thousand-ton vessels that come to New Orleans.

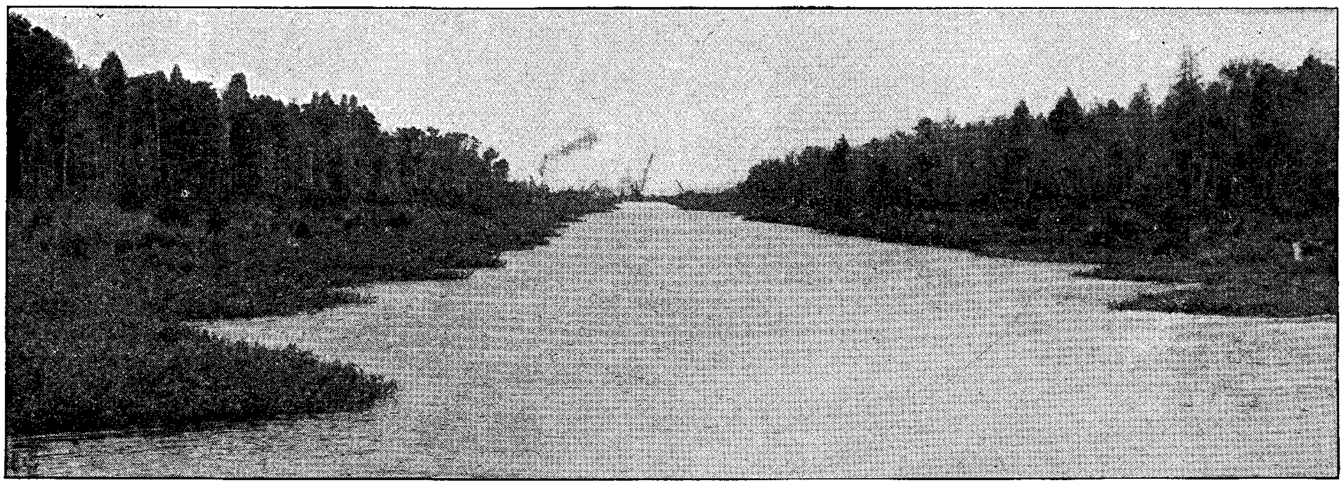
"One gets a realizing sense of the size of the job when he is told that one hundred thousand cubic yards of dirt have been excavated from the cut, which goes sixty-five feet below the surface of the ground. This is the hundredth part of the total excavation for the entire six miles of canal. It would take ten thousand flat cars to carry that dirt—a train one hundred miles long.

"Fourteen thousand piles, from fifty to sixty feet long, are necessary to support the floor of this lock, which will be of concrete and 10 feet thick. About one hundred and twenty-five thousand barrels of cement will be used in making the one hundred thousand cubic yards of concrete that will go into the lock, and six thousand tons of reenforcing steel.

"The top of the lock floor will be twenty feet below the natural surface of the ground. The top of the lock will be forty-five feet above the highest known stage of the river. Its sides will be terraced for one hundred and fifty feet on each side of the retaining wall and planted as a park for general use.

"Five sets of steel gates are required, each weighing four hundred tons. Four sets are for regular use, and the fifth will be for emergencies. All will be electrically controlled. At the end of the lock nearer the river there will be a bridge for pedestrians, street-cars, automobiles, and railroads. The approaches to this are a three-thousand-foot viaduct. The great crane, with its accompanying built-up steel-slotted plates, can also be used as a dam across the mouth of the lock in case of emergency.

"Counting the concrete reenforcing rods, the lock gates, and the four 117-foot bascule bridges being built across the canal, the total weight of the steel used on this job will be 14,500 tons. Two and a half million feet of lumber, board measure, is being



GLIMPSE OF THE CANAL THAT WILL PUT NEW ORLEANS FORTY MILES NEARER THE SEA.

used in the concrete form work, and the volume of water continued in the canal will be about 6,100 acre-feet—that is, sufficient to cover 6,100 acres (ten square miles) to a depth of one foot.

"Back of the locks the canal widens to 410 feet, according to the plans. The full width has not yet been reached here, but will in the course of time. This section will be called the Fairway, with a bottom wide enough to enable two vessels drawing twenty-nine feet of water to pass. In all probability this section will be devoted to the sites of deposit warehouses. This part of the canal can also be developed to the use of the new inland waterways trade begun by the Government on the Mississippi and Warrior rivers.

"At the farther end of this Fairway lies the eighty-acre shipyard of the Foundation Company, on the banks of the Turning Basin. This yard has already launched two ships for the French Government—4,200-ton non-sinkable vessels of the Parmentier type. This company actually began to build ships in the middle of a field, about a mile from the nearest water, so confident did it feel in the ability of New Orleans to carry the project through to a successful conclusion. Three more vessels are on the ways, and the boats will go to sea on time, even if it will be a year before the lock is completed, because a channel has been dredged through Bayou Bienvenue, temporarily connected with the canal system, to open water. The Foundation Company originally intended to establish here only a $1,250,000 assembling-yard, but it later increased its facilities by the addition of a fabricating plant.

"From here to Lake Pontchartrain the canal slants away on one tangent—straight through the cypress swamp. First of all, workmen had to clear away the trees, averaging two hundred to the acre. The cypress stumps of the surface were a great difficulty, but nothing in comparison with the stumps and logs found at various levels below the surface. These are the remains of forests eighteen thousand to twenty thousand years old, according to the theory of local geologists. Louisiana is what is known as a region of subsidence. The Gulf of Mexico, as is well known, at one time extended to where Cairo, Ill., is now. Early in the earth's history great forests were where New Orleans now lies.

"They sank beneath the sea; rivers with their silt again built up land, and new forests grew; they, too, sank, and the cycle was repeated. The ordinary type of twenty and twenty-two-type dredge, even with the strength of one-thousand horse behind it, was unable to penetrate these obstacles, and special machinery was developed by a New Orleans engineer to meet the difficulty. And now a full twenty-six feet of water extends straight to the lake. The canal is to be deepened four feet more, and its width is also to be increased to the planned size of 330 feet at top and 150 feet at the bottom. But not many vessels that carry six thousand tons of cotton need any more. . . . . . .

"At the Pontchartrain end of the canal is the Doullut & Williams shipyard, building six vessels of 9,600 tons each for the Shipping Board. Four of the hulls bulk hugely on the ways. The first steel was laid November 20, 1918, just three months after work on the yard began.

"At the Florida Walk section the great drainage siphon is being built. This is a canal under the Industrial Canal, and through it will be pumped the entire drainage of New Orleans into Lake Borgne. Most of the drainage now goes into Lake Pontchartrain, and this is one of the reasons why the lakeside front yard of New Orleans has not been more developed to resorts and homes. Splendid bathing beaches are available here. As soon as possible after the completion of the siphon the drainage will be sent into Lake Borgne, which leads into the Gulf of Mexico."

EINSTEIN'S OWN STORY

DR. EINSTEIN HAS THE HONOR not only of restoring metaphysics to a position in natural science that it has not held since the days of the early schoolmen, but of making the man on the street or in the trolley-car talk about it. Philosophers have long recognized that certain things, seemingly absolute, are only relative; but the ordinary citizen cared not a whit until certain other things, the result of a mathematical discussion begun fifteen years ago, were suddenly found, by observers of a solar eclipse, to have real correspondence with nature. When a philosopher says "nothing is absolute, only relations exist," it might be thought that he had gone the limit in this direction; but Einstein goes further—he tells us that some relations are themselves relative. Even Sir Isaac Newton acknowledged the non-existence of any such knowable thing as absolute position in space; only difference of position, distance, the relation of two positions, is knowable. With Einstein even this is indefinite, being dependent on the velocity of the observer. Einstein himself refers his theory, or his discovery, whichever it may be termed, to his effort to reconcile two apparently incompatible principles, both of which he believes to be true. Whether the elaborate system thus evolved satisfies the mind better than a denial of one or the other principle at the start, it is difficult to say. Dr. Einstein writes of his work in *The Times* (London), and our quotations are from a reprint of the article in *Science* (New York, January 2). He says:

"There are several kinds of theory in physics. Most of them are constructive. These attempt to build a picture of complex phenomena out of some relatively simple proposition. The kinetic theory of gases, for instance, attempts to refer to molecular movement the mechanical, thermal, and diffusional properties of gases. When we say that we understand a group of natural *phenomena, we mean that we have found a constructive theory* which embraces them.

"But in addition to this most weighty group of theories, there is another group, consisting of what I call theories of principle. These employ the analytic, not the synthetic, method. Their starting-point and foundation are not hypothetical constituents, but empirically observed general properties of phenomena, principles from which mathematical formulas are deduced of such a kind that they apply to every case which presents itself. Thermodynamics, for instance, starting from the fact that perpetual motion never occurs in ordinary experience, attempts to deduce from

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HOW THE ASPHALT IS EXCAVATED AND LOADED.

this, by analytic processes, a theory which will apply in every case. The merit of constructive theories is their comprehensiveness, adaptability, and clarity; that of the theories of principle their logical perfection and the security of their foundation.

"The theory of relativity is a theory of principle. To understand it, the principles on which it rests must be grasped. But before stating these it is necessary to point out that the theory of relativity is like a house with two separate stories, the special relativity theory and the general theory of relativity.

"Since the time of the ancient Greeks it has been well known that in describing the motion of a body we must refer to another body. The motion of a railway-train is described with reference to the ground, of a planet with reference to the total assemblage of visible fixt stars. In physics the bodies to which motions are spatially referred are termed systems of coordinates. The laws of mechanics of Galileo and Newton can be formulated only by using a system of coordinates.

"The state of motion of a system of coordinates can not be chosen arbitrarily if the laws of mechanics are to hold good (it must be free from twisting and from acceleration). . . . The special relativity theory is the application of the following proposition to any natural process: 'Every law of nature which holds good with respect to a coordinate system must also hold good for any other system, provided that [the two] are in uniform movement of translation.'

"The second principle on which the special relativity theory rests is that of the constancy of the velocity of light in a vacuum. Light in a vacuum has a definite and constant velocity, independent of the velocity of its source. Physicists owe their confidence in this proposition to the Maxwell-Lorentz theory of electrodynamics. The two principles which I have mentioned have received strong experimental confirmation, but do not seem to be logically compatible."

What Dr. Einstein apparently means is that the first principle quoted asserts the dependence of natural law on the motion of the observer, while the second asserts the absolute independence of one law—that fixing the velocity of light. In his theory, he achieves their logical reconciliation, he asserts, by making a change in the doctrine of the physical laws of space and time. He goes on:

"It became evident that a statement of the coincidence of two events could have a meaning only in connection with a system of coordinates, that the mass of bodies and the rate of movement of clocks must depend on their state of motion with regard to the coordinates. . . . . .

"Physics had to be modified. The most notable change was a new law of motion for (very rapidly) moving mass-points, and this soon came to be verified in the case of electrically laden particles. The most important result of the special relativity system concerned the inert mass of a material system. It became evident that the inertia of such a system must depend on its energy-content so that we were driven to the conception that inert mass was nothing else than latent energy. The doctrine of the conservation of mass lost its independence and became merged in the doctrine of conservation of energy.

"The special relativity theory, which was simply a systematic extension of the electrodynamics of Maxwell and Lorentz, had consequences which reached beyond itself. . . . Consider the case of a system of coordinates which is conceived as being in stable rotation relative to a system of inertia in the Newtonian sense. The forces which, relatively to this system, are centrifugal must, in the Newtonian sense, be attributed to inertia. But these centrifugal forces are, like gravitation, proportional to the mass of the bodies. Is it not, then, possible to regard the system of coordinates as at rest and the centrifugal forces gravitational? The interpretation seemed obvious, but classical mechanics forbade it.

"This slight sketch indicates how a generalized theory of relativity must include the laws of gravitation, and actual pursuit of the conception has justified the hope. But the way was harder than was expected, because it contradicted Euclidian geometry. In other words, the laws according to which material bodies are arranged in space do not exactly agree with the laws of space prescribed by the Euclidian geometry of solids. This is what is meant by the phrase 'a warp in space.' The fundamental concepts 'straight,' 'plane,' etc., accordingly lose their exact meaning in physics.

"In the generalized theory of relativity, the doctrine of space and time, kinematics, is no longer one of the absolute foundations of general physics. The geometrical states of bodies and the rates of clocks depend in the first place on their gravitational fields, which again are produced by the material systems concerned.

"Thus the new theory of gravitation diverges widely from that of Newton with respect to its basal principle. But in practical application the two agree so closely that it has been difficult to find cases in which the actual differences could be subjected to observation. As yet only the following have been suggested:

"1. The distortion of the oval orbits of planets round the sun (confirmed in the case of the planet Mercury).

"2. The deviation of light-rays in a gravitational field (confirmed by the English Solar Eclipse expedition).

"3. The shifting of spectral lines toward the red end of the spectrum in the case of light coming to us from stars of appreciable mass (not yet confirmed). . . . . . .

"No one must think that Newton's great creation can be overthrown in any real sense by this or by any other theory. His clear and wide ideas will for ever retain their significance as the foundation on which our modern conceptions of physics have been built."

An interesting statement by Dr. Einstein in his conclusion is an admission that his system stands or falls by any single detail. Modification is impossible. The whole is either true or untrue.

WHERE THE ASPHALT COMES FROM

THE FAMOUS PITCH LAKE of Trinidad, which supplies us with most of our asphalt, is illustrated and described in *The Scientific American Supplement* (New York). Long ago, says the writer, when Nature was stocking her storehouse with gifts for man, she must have recognized modern needs for smooth and dustless highways. For in the crater of an extinct volcano she set up her chemical laboratory for producing an inexhaustible supply of asphalt, the perfect road-material. He continues:

"Nature is not always kind to man; many of her treasures are hidden deep down in the earth, or at the bottom of the sea. For copper, tin, and gold man must climb high mountains and drill and blast through miles of rock; not so with asphalt, however, for here Nature seemed to have been in a pleasant mood. 'Let's make it handy,' she seemed to say, and handy it is. Near the sea it lies, and right on the surface so that no mining is necessary—in a form so pure that it requires almost no refining and in a constantly renewed supply. What other mineral can you name which, when a wagon-load is taken away, accommodatingly fills up the hole by itself, so that there is just as much there as before? Sounds like a story of mythology, yet asphalt does just that. The largest and best-known asphalt deposit in the world is found on the eastern side of the island of Trinidad, just a few miles off the coast of Venezuela, South America. This great deposit has been worked for years at the rate of 200,000 tons a year, yet there is no hole to be seen, not even a depression in the bed, and, apparently, there is just as much there now as there was at the very beginning.

"The 'Pitch Lake,' as it is called, occupies what seems to be the crater of an extinct mud volcano. It is about a mile from the seashore, and has an elevation of 135 feet above the sea. The 'lake' or deposit covers an area of about one hundred acres, and is of an unknown depth. Borings of a hundred feet have been made. The surface is hard, excepting a few soft spots near the middle; it resembles brownish-black earth or stone. In places it is a bit soft underfoot so that the shoes leave impressions in the surface just as they do on an asphalt pavement of a hot day.

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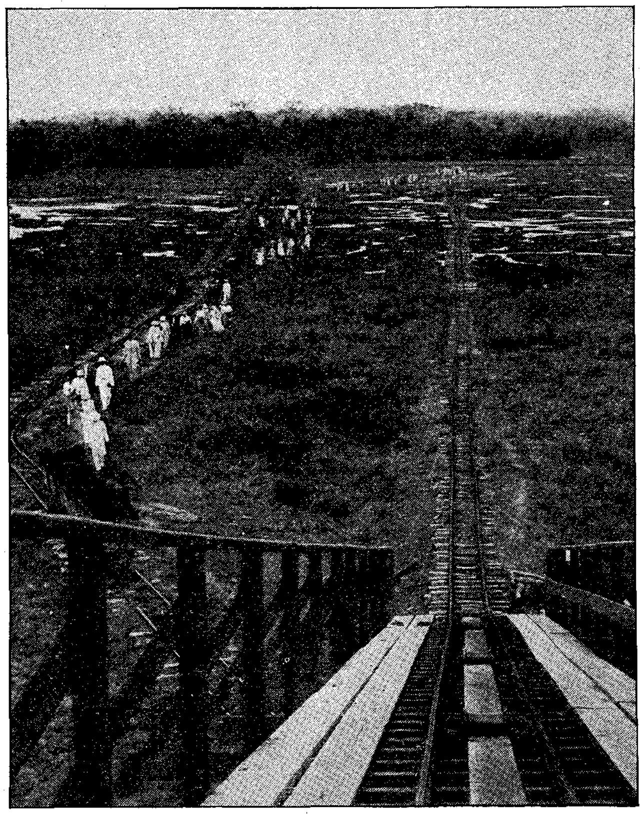
THOUSANDS OF BARRELS OF ASPHALT

Ready for shipment.

"This asphalt contains very little foreign matter, and as it stands could be used for road-work."

"There are a few soft spots where the mass oozes and bubbles up in a semiliquid state. There is no vegetation over the deposit, and standing at the edge one notes that it is perceptibly higher in the middle than at the sides.

"The deposit is owned by the Government of Trinidad, and is leased to an American company to work. The income to the island from this curious deposit is said to amount to around a quarter of a million dollars annually.



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VIEW OF THE ASPHALT LAKE

From the railroad incline.

"This great deposit has been worked for years at the rate of 200,000 tons a year, yet there is no hole to be seen, not even a depression in the bed, and, apparently, there is just as much there now as there was at the very beginning."

"A refinery is located near the edge, and several narrow-gage tracks run out across the lake. The cross-ties of these tracks must be renewed every few weeks, for they gradually sink down and disappear in the asphalt, and if new ones are not constantly supplied the track itself would soon go out of sight. Negro workmen dig up the crude asphalt with picks in the spots where it is hard; the soft spots are left alone. It does not come up easily, but is rather tough, bends but does not break easily. The mass below the surface is full of holes and reminds one of Swiss cheese. The farther down we go the softer does the material become, so that after one spot is dug out to a depth of about two feet or so, the workmen are obliged to dig in some other place. In the course of a week or ten days the hole that was dug out fills itself up again even with the surface. The heat is intense over the whole surface of the lake.

"This asphalt contains very little foreign matter, and as it stands could be used for road-work. When it is to be used for roofing or the making of asphalt paints it is put through a special refining process.

"Asphalt or asphaltum is like coal, a product of prehistoric vegetation. The only other deposit which approaches this one in size is found in the lowlands of Venezuela about fifty miles from the coast, and altho of a still purer quality the location of the lake makes it hard to get at. Some authorities claim that these two lakes are connected, and are fed from the same source through subterranean fissures in the rock.

"Asphalt was first used as a road-material in Paris some fifty years ago, but has attained its greatest usefulness in America."

DEPARTMENT OF SCIENCE AND INVENTION CONTINUED ON PAGE 85

LETTERS - AND - ART

MAUD POWELL

THE VIOLIN is on top now in music, where the piano stood in the public affection some years back. In pointing to this fact a few weeks ago a quoted authority stated that it was due to the dominance of great personalities in that field of art. Since the death of Maud Powell we find *The News-Leader*, of Richmond, declaring that "with Ysaye and Kreisler she was responsible for that tremendous interest in the violin which is perhaps the most outstanding feature of musical life in America to-day." All the other native performers on this instrument are given a secondary place to her both as an artist and as an influence. Naturally the question of sex has been interjected into the appraisals of her art since her death, but the Philadelphia *Inquirer* claims that she "ranked among the greatest of violinists without regard to sex." Yet sex is admittedly a bar to the highest achievements on this instrument, as *The Inquirer* sees the question in relation to this late distinguished exponent:

AN UNCONVENTIONAL PORTRAIT OF MAUD POWELL,

Who dies leaving no successor of equal eminence among women musicians to fill her place.

"In all those respects which constitute the criterion of violin-playing, in technique, in style, in taste, in method, and in expression, she was a perfect mistress of her instrument, and those who must be accounted her superiors may be numbered on the fingers of a single hand. Her limitations were those which her sex ineluctably imposed. To realize all the potentialities of the violin requires more physical strength than is generally imagined, and this is probably one of the reasons why women violinists of the first order of ability have been so few.

"How many within recent years can be recalled who were admittedly in the virtuoso class, or who were qualified to play in association with a symphony orchestra? Only three or four, and these have disappeared from the concert-room long enough to be generally forgotten. There was Madam Norman Neruda, known in private life as Lady Charles Halle, wife of the distinguished pianist. She was an admirable player, with a large tone and a well-developed technique and a disciplined power of coordination; but it was rather as a member of a famous quartet than as a soloist that her reputation was made and her best work done. Another gifted artist was Camilla Urso, who belonged to a past generation, but whom some old-timers will remember as a player rather showy than sound, whose most popular effects were achieved by means which, by the purists at least, are not recognized as strictly legitimate.

"More recently, but a good many years ago at that, came Teresina Tua, who was heard here on a single occasion with the Boston Symphony Orchestra, was damned with faint praise, and quickly faded away without ever having been missed. That about completes the list, and Maud Powell was easily the equal of the first-mentioned and no less easily the superior of the other two.

"Considering how many thousands of young women have been and are violin students, it is somewhat surprizing that no one can be named as competent to fill the place which the passing of Maud Powell has vacated."

Sketching her career, the New York *Times* says:

"She was born in Peru, Ill., on August 22, 1868, the daughter of William Bramwell and Minnie Paul Powell. Many years afterward, when asked the question:

"'Is it true, Miss Powell, that you have Hungarian blood?' she made the reply:

"'It is. Through my mother I have inherited real Gipsy blood, I am sure. My mother was a German, but she must have had Hungarian ancestors. I remember her once saying, when she heard a band of strolling players, "I could follow them." She meant it. She was a Gipsy, and so am I. I always think of that remark of hers when I play the final movement of the "Wieniawski concerto."'

"As a child her natural gift for the violin was so marked that her parents sent her at the age of nine to Chicago, where she received instruction from William Lewis for four years. Lewis then advised that her training should be continued at Leipzig. There she entered the class of Professor Schradieck, and her progress was so rapid that at the end of a year she was given her diploma.

"To broaden her musical education by a knowledge of other methods, she went to Paris and passed first on the list of eighty applicants in the contest for places in the Conservatoire. In Paris her teacher, Dancia, provided valuable additions to her artistic equipment, giving her particularly a more assured poise in performance.

"It was in London the following year that Joachim heard her play. She was appearing in concerts in various parts of England, and was hailed as a sort of infant phenomenon. But Joachim at once greeted her as an artist, not merely a prodigy, and invited her to Berlin and to receive special instruction from him. She seized this chance thus to complete her education under the master, and the ensuing year she spent in Berlin, making what may be considered her début there in 1885.

"On her return to America her New York début with the Philharmonic Orchestra followed the same year. From that time until her death her position in the musical world was assured. Theodore Thomas at once engaged her for a series of concerts in all the large Eastern cities, and her success was instantaneous.

"Her life since then had been one of constant industrious devotion to her art. She appeared as a soloist in the orchestras of nearly every great conductor of the period, including Seidl, Gericke, Nikisch, and Damrosch, toured Germany and Austria with the Arion Society in 1892, organized the Maud Powell String Quartet in 1894, toured the British Isles and the Continent in 1900 and 1901, South Africa during three following years, and every season thereafter made a tour of this country."

Counting up our instrumentalists, it is seen that the men far outnumber the women, so the fact that Maud Powell began her career in an atmosphere of "strong opposition to women in instrumental music" leads us to reflect on those whose enthusiasm and talent may have died within them. A writer in the New York *Evening Post*, probably Mr. Finck, observes:

"No doubt it did seem odd to see a girl of twenty stand on the stage conspicuously, playing a violin solo with Theodore Thomas and the eighty or more men of his orchestra as her accompanists;

but it was a spectacle to which music-lovers soon became accustomed. There are orchestral instruments which will always be unsuitable for women—drums and trombones and mammoth tubas. But the violin is all right; no less an authority than Berlioz called it the woman's voice of the orchestra. It is habitually used for the expression of beauty and sentiment, the outbursts of virile force being left to the brasses and the instruments of percussion.

"Some women musicians are more masculine than their rivals of the strong sex. Schumann, in his letters to the pianist who became his wife, frequently admonished her to restrain her aggressively virile temperament. That a woman can be forceful and impetuous without being in the least mannish is illustrated by the eminent Chicago pianist, Fannie Bloomfield Zeisler, whom Huneker called the Sarah Bernhardt of the keyboard. The same critic years ago accused Maud Powell of not developing the feminine side of her work. She had not done so purposely, because of the then existing prejudice against women violinists; but thenceforth she determined, as she remarked to Frederick H. Martens, 'to be just myself, and play as the spirit moved me, with no further thought of sex or sex distinctions, which in art, after all, are secondary.' She realized this forcibly on one occasion when, with some other judges, she listened behind a screen to young competitors on the violin and piano. In several cases all the judges guessed wrongly. Sir George Henschel, however, relates that Brahms never failed to guess the sex of an unseen player.

"While it is true that the most forcefully masculine pianists, like Liszt, Rubinstein, Paderewski, Hofmann, Powell, to name only a few, had and have their moments of exquisite tenderness, which is classed among feminine attributes, it is to be sincerely hoped that sex in music will never be obliterated."

The New York *Evening Sun* speaks of the dead woman's Americanism:

"She saw clearly the failures in our national art and the sources of such weakness. Referring once to successful American work in many fields, she said: 'There are more liveliness and high spirits than of spirituality. We don't live deeply enough. We depend too much on the big outer stimulus—like a baseball game—to rouse us. . . . We must be turned away from the things that we possess to a deeper inner life.'

"Being a woman, she must needs find greatness in the expression of her womanhood. Those who said she 'played like a man' were deceived by the courage and intensity of her attack. There was no imitation of masculinity. When Maud Powell played her fiddle sang for the dumb fingers of old women sewing the years into the fabric of their patience; for the hand of the bride adorning herself for her husband; for the child who holds a first doll in the small circle of her arm; for the pioneer's wife, the sailor's, and the soldier's; for the lonely woman unfulfilled.

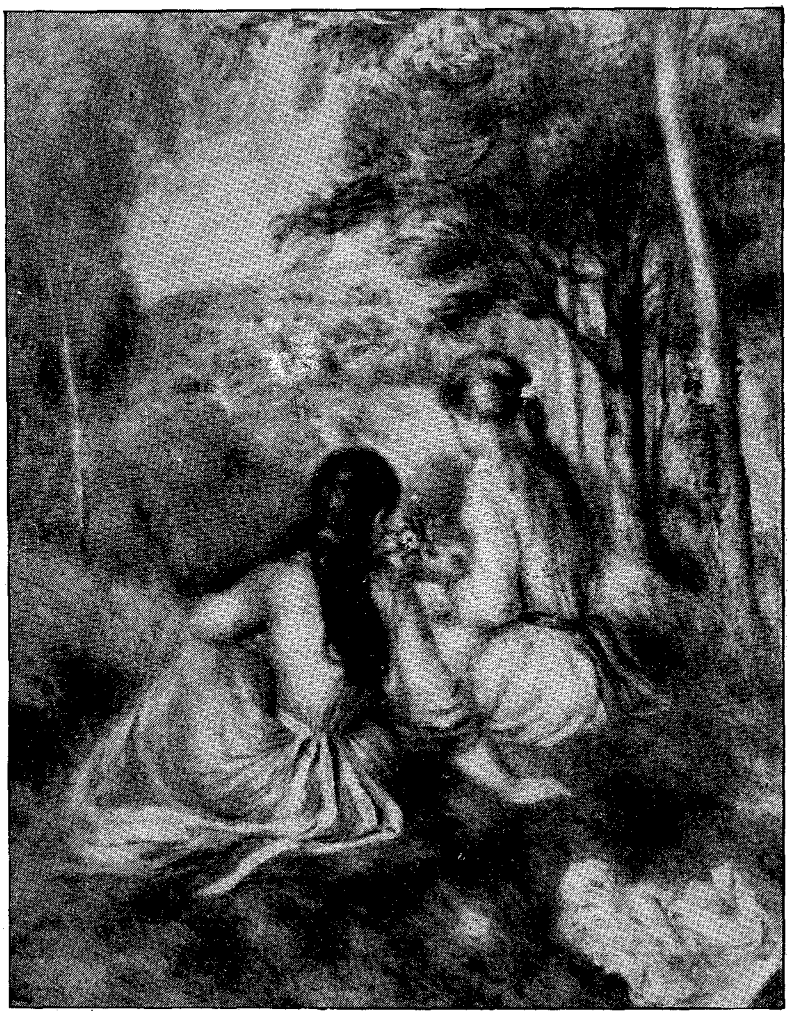
"America was richer for her life. And tho the strings of her violin are silent, waiting in vain for the melodious marriage of the bow, all that she gave is not lost. For the lesson of her life is not limited to the violinist. Every honest craftsman may take inspiration from a career guided by so lofty a purpose, wrought out through such faithful apprenticeship, bestowing upon others an unshadowed service whose flower was beauty and truth."

The Brooklyn *Eagle* mentions a trait:

"Years ago, when Sibelius was an unknown name in this country, Miss Powell, as she was then, played his exacting violin concerto at a special concert in Carnegie Hall. So far as anybody could guess from the state of musical taste at the time the work would be useless for her concert repertory and it seemed unlikely that she would have occasion to repeat it. Yet for that single performance she memorized that long composition in an unfamiliar style. That was Maud Powell. She was never content to play anything until she had put the best of herself into it and until she had brought the best out of it which her strong musical intelligence and great patience could fathom."

RENOIR

PARIS SHOP-GIRLS, in the slang of the city called *midinettes*, found their painter in Auguste Renoir. "He has given them all the charm that, and far more character than, the eighteenth-century painters gave to those great ladies of their period," says a writer in the Manchester *Guardian*. Painters of the advanced schools of to-day are apt to go back of Matisse, their chief exemplar, to Renoir, who is said to have inspired Matisse and so made himself the fountain-head of the art of to-day about which men continue to dispute. Impressionism, of which Renoir was one of the pioneers, through him becomes Postimpressionism, and so on into things of which he might have prayed to be spared the blame. He died the other day at Cannes, at the age of seventy-nine, a few days too soon to hear the results of the sale of several of his pictures in New York on January 14. Not that the news that one of his paintings brought $27,000 and another $28,000 would do him any material good; but it could not fail to justify his faith in himself, tho he might reflect bitterly on the time he let a picture go for $28. A writer in the Boston *Transcript*, "M. F. B.," says:



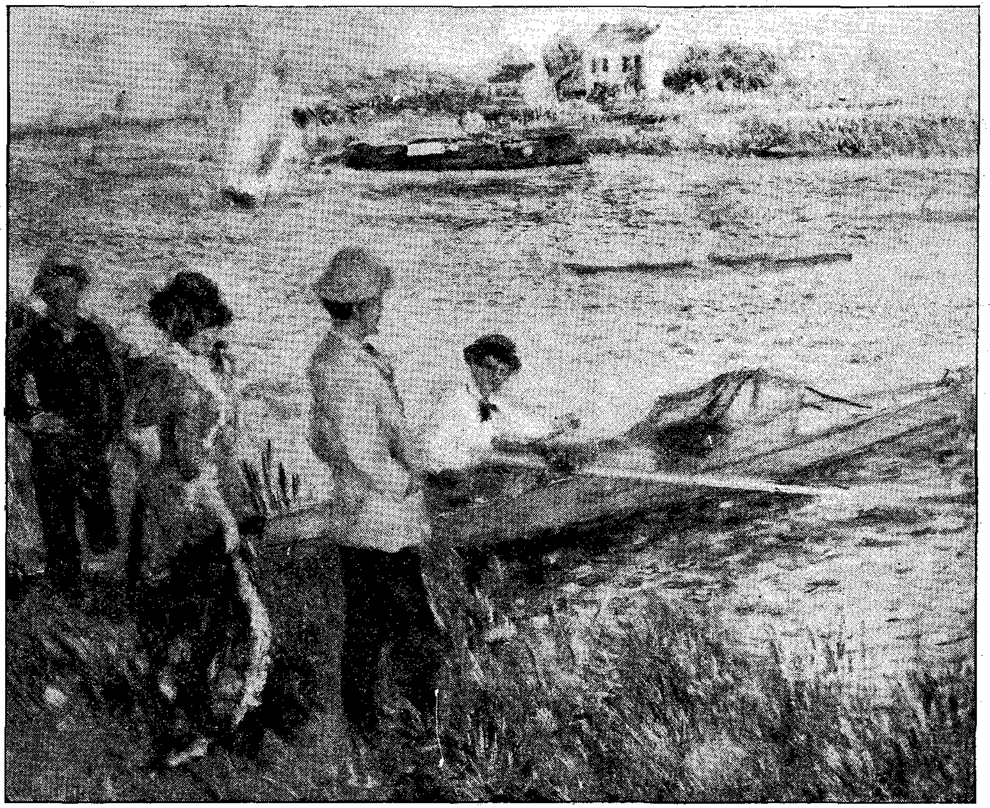
Courtesy of American Art Association.

"DANS LA PRAIRIE."

This Renoir, which brought $28,000, represents the more domestic side of the painter's interest. His pictures of the Paris *midinette* are among his more piquant subjects.

"It seems incredible to us now, when the tenets of Impressionism are so fundamental and accepted as a part of present-day paintings, that in 1877 Renoir was forced to sell his canvases by public auction sale, and at one sale for twenty canvases only realized about $430. Of these, one of the most beautiful nudes, 'Avant le Bain,' went for $28. He was not entirely without following at that time, tho, as he painted several very successful portraits. In these he at first, through policy, selected sober schemes of color, and finally in 1879 he was again admitted to the Salon and continued to exhibit there for several years with increasing *éclat*, until gradually the public accepted the ideas of the Impressionists and they came into their own. In the autumn Salon of 1904, Renoir had a large space set apart for his works and exhibited a representative collection of canvases which called forth universal praise.

"Renoir was a most prolific painter and he painted every kind of subject. His work so completely sums up the ideas and methods of the Impressionists that it alone would form a comprehensive record of this movement, tho he was not as good a draftsman as Degas or as exquisite a colorist as Monet. His work was very uneven, and he appears to have used three distinct methods. The first of these is found chiefly in his nudes, in which the paint appears to be put on with a palet-knife. In these nudes he was more concerned with the luminous qualities of the flesh than with the line, and his drawing is often inaccurate. The second manner is more closely related to Impressionist methods. It is the way in which he painted his landscapes, flowers, and his portraits, and more closely resembles the broken color of Monet. His best canvases were made this way, including his 'Déjeuners des Canotiers,' the 'Bal au Moulin de la Galette,' 'The Terrace,' and 'The Sleeping Woman with Cat.' The third method appears to be a combination of the two, and by it he experimented a great deal with brilliant colors, not always successfully."



Courtesy of the American Art Association.

"CANOTIERS À CHATON."

This and the preceding brought record prices for Renoir, $27,000 being paid for this "gay, colorful scene."

The works of Renoir were first seen in this country in 1886, when, in an exhibition of the Impressionists held in New York, there were thirty-six pictures by Renoir, fourteen by Manet, twenty-two by Degas, forty-one by Pissaro, fifty by Claude Monet, twelve by Sisley, eight by Berthe Morisot, and seven by Guillamin. America almost at once began to buy pictures by the Impressionists, and the sale just held is called by the press the finest collection of the work of the modern French artists, Monet, Renoir, Manet, Sisley, ever put up at public auction. Mr. Arthur B. Emmons, the principal owner of this group made up of several collections, declares in a note that the charm of his collection is not due to chance, but that in gathering it during the past ten to fifteen years it had been understood in New York and Paris that he would not hesitate to pay the best price for the work of these two artists (Monet and Renoir), and he believed he had obtained the cream of the market. The prices for the two Renoirs, being records, bear out this claim. In a notice of Renoir by "R. E. D.," in the Manchester *Guardian* we read:

"Renoir, like Sisley and the other Impressionists who had no private means, had a hard struggle for existence; for the first sixteen years, at least, of his career as a painter he was in extreme poverty, but he continued to persevere. It was Charpentier, the well-known publisher, who gave him the opportunity of escaping from penury. Renoir had painted a head of Madame Charpentier, which was exhibited at the Impressionist exhibition of 1877. Charpentier was so much pleased with it that he commissioned the artist to paint a large, life-sized portrait of his wife and their two little girls. This is the famous 'Charpentier Family,' now in the Metropolitan Museum of New York, thanks to the enlightened initiative of Mr. Roger Fry. It is the masterpiece of this period of Renoir's art. Owing to the personal influence of Madame Charpentier, this picture and the very fine portrait of the actress, Mlle. Jeanne Samary, were accepted by the Salon in 1879.

"Renoir continued to exhibit at the Salon for several years, but he again appeared at the Impressionist exhibition held in the Rue St. Honoré in 1882, when he was represented by twenty-five pictures, and also in that of 1883. Since 1883 he has only once exhibited, at the Salon, namely, in 1890, when he sent a large picture of the three daughters of the poet Catulle Mendès. In the winter of 1881-82 Renoir had visited Italy, and painted at Venice, Naples, and Palermo; he caught a chill in arriving at Marseilles, and his doctor ordered him to Algiers, where he spent the spring of 1882, and whence he brought back many brilliant paintings of African sunlight."

From another hand is printed in the same paper this view of his later years:

"Renoir, whose death is announced this evening, had for a good many years lived chiefly in the south of France, but he used until recently to spend the three hottest months of the year in Paris, where he arrived just when other people were thinking of going away. Like Degas, he was true to Montmartre, and had a flat with a large studio on the boulevard near the Cirque Medrano, commonly known as 'Boumboum.'

"It was there that I saw him for the last time—it must have been in the summer of 1914, shortly before the war. He was very infirm and spent his time in a wheeled chair, being unable to walk. He was still painting, but the brush had to be put into his hand, for he could not pick it up. The marvelous color remained, but in other regards pictures painted in such conditions were naturally below the level of his best work.

"I had undertaken to organize an exhibition of his paintings in the galleries of a leading London dealer. Renoir was much interested in the project, and gave his formal adhesion to the appeal to collectors to lend pictures. The exhibition was to be held in the autumn of 1914, but the war put an end to the scheme.

"Of the great Impressionists only Claude Monet now remains. He is nearly the same age as Renoir, but when I last heard news of him his seventy-eight years still sat lightly on him and he was wonderfully young and vigorous."

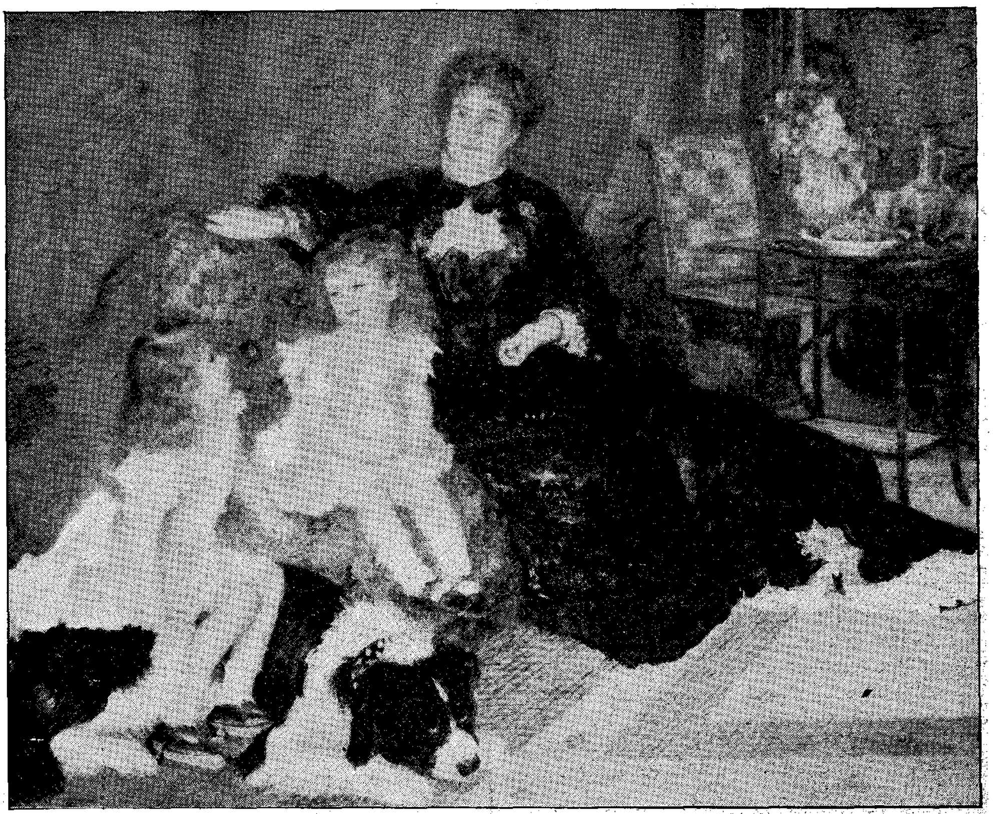
THE "WALKOUT" OF SCHOOL-TEACHERS

TEACHERS HAVE FINALLY STOPT PLEADING for more pay and have "walked out." Last year 143,000 school-teachers abandoned their calling to go into better-paid work, according to Secretary Lane. *The Financial Chronicle* (New York) calls attention to the fact that one thousand rural communities in New York State have been forced to close their schools because of a lack of teachers. It places the shortage at five thousand in this State alone. Four hundred schools in West Virginia have not reopened this year. New Jersey confesses to six thousand pupils being now "handicapped in their preparation for the competition of later years" by conspicuously poor teaching, and furthermore it owns that the State faces a "demoralized and broken-down educational system." Other States own to a reduced efficiency in educational facilities. All in all there is a shortage of thirty-nine thousand teachers according to a careful poll of the National Education Association, and sixty-five thousand employed who are admittedly unfit for the job. At a recent meeting in New York of Commissioners of Education for nine States these statements were made, and their publication leads the New York *Evening Post* to comment:

> "The reason is inadequacy of pay. Particularly distressing is the condition of rural schools. Cities show a considerable responsiveness to the campaigns undertaken for the teacher, but the country is more wedded to 'economy' and more likely to think that 'anybody can teach school.' Commissioner Kendall believes that New Jersey's principal problem lay in the rural schools, where the minimum salary is $70 a month. New York's Deputy Commissioner remarked that the same was true of this State, where one thousand rural communities were forced to close schools last year and contract for the education of their children in other towns. The result, he added, was abandoned farms, for tenants moved to localities which furnished proper advantages. Commissioner Smith, of Massachusetts, said that the same consequence, rural degeneration, was evident in the Bay State; two thousand teachers were working there in 1918 for annual salaries of less than $550, many at $400, and some even at $350. In Alabama last year the average salary for male teachers in white schools was $470, or less than $10 a week for the year, and for female teachers, $312, while the average salary for teachers in negro schools was the incredible sum of $179.
>
> "No wonder President Neilson burst out before Smith Alumnæ that teachers had been patient till patience was sinful, and he was glad to hear of thousands of vacancies:
>
> "'I hope there will be thousands and thousands more. I hope there will not be a public school in the country next year that isn't handicapped for lack of teachers.'"

The prominence of the rural-school problem and the failure of the cities to raise salaries, says *The Evening Post*, commends the matter to the State legislatures:

> "New York would be in far worse position to-day had it not been for the Lockwood Law of 1919, which added substantially to the wages paid both up-State and here. In 1915 thirteen States fixt by law the minimum pay. The number should be doubled and trebled. Maine's Commissioner declared this week that since the minimum there has been made $900 no difficulty has been found in maintaining the schools. The admirable education bill of Massachusetts last year made it $650, offered a premum of $100 additional for a year's training and a fixt amount of experience, and added $100 more for further qualifications. 'The larger and more progressive States,' said the Massachusetts Special Commission on Education, 'have tended toward a definite policy of State support by direct appropriation in addition to the local systems of 'taxation.'
>
> "State legislation demands preceding or accompanying State measures for the consolidation and more efficient administration of schools, the county usually being taken as unit, tho New York took the township. In old States especially the principle that wealthy communities with few children should assist poor ones with many meets opposition. But it can be rushed through, and only by State action can the influence of generous and efficient ideas reach the most penny-pinching and backward cities and districts."



By permission of the Metropolitan Museum of Art, New York.

"THE CHARPENTIER FAMILY."

Painted around 1879 and regarded as the masterpiece of this period of Renoir's work.

The resignation of Dr. Virgil Prettyman as head of the Horace Mann School to accept a position in the business world "typifies the drift of the ablest minds out of the teaching profession." The New York *Evening Sun*, saying this, also points to his action as "noteworthy by the gloomy picture he draws of the future of education in this country." It goes on:

> "The present salary increases, he says, are totally inadequate. Nothing less than 200 or 300 per cent. will meet the situation. Since at present this is out of the question, it will be impossible to secure the services of men and women properly equipped for teaching. 'I am frankly pessimistic about the future of education,' he says. 'I do not believe America will realize the desperate situation of the schools in time to prevent the wrecking of the entire system.'
>
> "It is to be hoped that Dr. Prettyman pictures the case in too gloomy a light. No one will deny the urgency of the need for greater salaries, but that the nation's educational system is in danger may well be questioned. Men and women of ability will in the future, as in the past, be drawn into the teaching profession, not because of the monetary returns it affords, but from a love of the work itself."

RELIGION-AND-SOCIAL-SERVICE

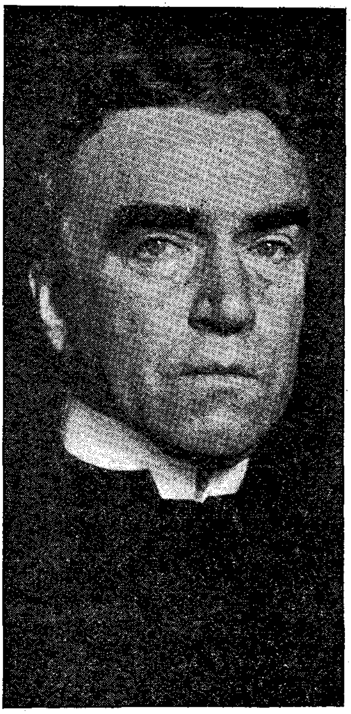
THE CHURCH'S DUTY TOWARD THE "RED"

WHEN THE RECTOR of a Fifth Avenue Church compares the *Soviet* "Ark" with the *Mayflower*, he precipitates a discussion of his denomination's proper attitude toward the suppression of dangerous radicalism. After Dr. Percy Stickney Grant, of the Episcopal Church of the Ascension, criticized the deportation of Emma Goldman and her fellow passengers on the *Buford* and emphasized the danger in suppressing "free speech," he was promptly rebuked by brother clergymen, and a committee of his vestrymen was asked to make a report upon his acts and utterances to the Bishop of his diocese. Dr. G. A. Carstensen, rector of an up-town Episcopal church in New York, declared in a sermon quoted in the New York *Evening Sun* that "by likening the deported anarchists to the Pilgrim fathers" Dr. Grant did "besmirch" the Cross of Christ "and befoul his pulpit." Dr. Carstensen went on to contrast the Pilgrim fathers with the voyagers on the *Buford* and to indicate clearly enough his own approval of the deportation:

"The Pilgrim fathers were God-fearing men of faith and courage who stood for loyalty to God and service to humanity. The unwilling passengers on the ship which sailed under sealed orders from New York in December, 1919, were idlers, slackers, ruffians, blasphemers. Listen to their own pronouncement:

"'We hate religion because it lulls the spirit with lying tales, takes away courage and faith in the power of men; faith in the triumph of justice here on the earth, and not in a chimerical heaven. We declare war upon all gods and religious fables. Religion covers everything with fog. Real evil becomes visionary and visionary good a reality. Religion has always sanctified slavery and grief and tears.'

"Of such sort are the vermin who claim that the world owes them a living and do not scruple to demand it with bombs and firebrands; creatures to whom the world owes nothing but sufficient voltage to rid the earth of them."



DEPORTATION IS UNAMERICAN.

Says Dr. Percy Stickney Grant, who is "not sure that the sailing of the *Soviet* ark will not take a place in history equal to the landing of the Pilgrims."

A few days later, as reported in the same newspaper, Bishop Burch of the Protestant Episcopal diocese of New York, without mentioning any names, told a meeting of churchwomen in the Cathedral that he was being inundated with letters questioning the loyalty of the Church or voicing fears that its loyalty was being questioned. He asked his hearers most earnestly "to make it clear to every one that the spirit of socialism, Bolshevism, or any other ism does not exist in this Church," and continued:

"We could not be a Church of Christ if we were not patriotic. We could not be faithful to the Lord if we were not loyal to the Government under which we live. . . . . . .

"We could not be loyal to his beloved voice if there was any wish on our part as a Church to go over the head of our established Government. The Government of the United States is perfectly adequate to deal with all the problems and difficulties with which it is confronted, and it is dealing with them. As a church we acknowledge the supremacy of the Government."

Two New York newspapers of such different types as *The Tribune* and *The Evening Journal* unite in declaring that Dr. Grant had a perfect right to utter whatever opinions he held about the deportations, and his own vestrymen in their report to the Bishop declare emphatically that their rector had a perfect right to say what he did and to allow the use of the Parish House as an assembly-place for the marchers protesting against the deportations. The committee desires to go on record to assert its "belief in the importance of a free pulpit." The reference to the *Mayflower* they declare to have been a mere "comment on the historical coincidence." This reference was reported as follows by the New York *World:*

"Two hundred and ninety-nine years ago to-day the *Mayflower* sailed into Plymouth Harbor. To-day the *Soviet* ark sailed from New York. I am not sure that the sailing of the *Soviet* ark will not take a place in history equal to the landing of the Pilgrims. To deport persons for having and preaching ideas is a very materialistic thing to do. You may deport three hundred or three million and think you are going to deport ideas, but you're not. Could one have devised a more fruitful method of advertising a cause or a more successful method of gaining friends for it?

"This deportation seems to have cast discredit on the boasted American tradition of free speech and discussion, the tradition that was so loved by Abraham Lincoln."

In a long statement given to the New York *Evening Post*, Dr. Grant sets forth his views on the proper national policy toward radicalism. He says in part:

"I agree that if there is a regulation by which a man can be excluded from the country upon his arrival he can logically be apprehended and deported later on. But when he has entered not by subterfuge; when he has resided not in hiding or on sufferance—perhaps for many years—then to invoke the immigration laws smacks of *ex-post-facto* legislation. In fact, it is very much like persecution.

"I believe that America generally (at any rate, the people) were shocked at the deportation on *Mayflower* day. Many said nothing because it seemed carried out by due process of law, and also because the parties put on board the *Buford* were depicted in blackest colors.

"We are dealing harshly with our weakest workers. Aliens have not the comeback of the ballot or even the backing of any organized government, since Russia is in straits and at war on fifteen fronts. They have not the assistance of money or of educated associates. In many cases they have not even the help of the English language. Are there any persons in America more at our mercy? Yet these are the people we seize, interrogate, accuse, deport."

Dr. Grant objects to deportation as an un-American method of punishment and unwise quite irrespective of the offenses of the aliens. He declares that deportation can never settle industrial unrest, that it is inconsistent with the democratic doctrine of free speech, and with modern educational terms. We do not nowadays throw bad boys out of school, but we rather provide special and better schools for them. So, says Dr. Grant, we ought to "give aliens our best laws and our most intelligent attention." Deportation, he continues, hurts us abroad by sending forth "three hundred ambassadors of hate" and by adding "to the mental resources of people with whom we are at war by sending leaders to them." And it hurts us at home, since we are "deporting working people in a depleted labor market when our need of workers is one of the elements in our industrial difficulties."

Finally, Dr. Grant wishes to have it understood that a clergyman's sympathies ought to be broad enough to include people of all views. As he puts it:

> "A clergyman that is not as broadly sympathetic as life demands has no business in his profession. He will go to the rescue of any one who seems to be hurt or who is being unfairly treated. And he does this without any prejudice to his views or behavior. If a man is run down in the street the people who hasten to his assistance do not inquire whether he is a burglar or a bishop. It is the hurt that they are concerned with."

In an editorial entitled "Active Anarchists and Careless Churchmen," *The Presbyterian Advance* declares that the church member is quite mistaken who believes radicalism and the stamping out of radicalism are solely the Government's business. In support of his assertion that the success of radical propaganda would be due to indifference upon the part of the Church, the Nashville editor points out that millions are being educated by radical propaganda into the belief that their dream of a better world "can only be realized through class struggle," and argues:

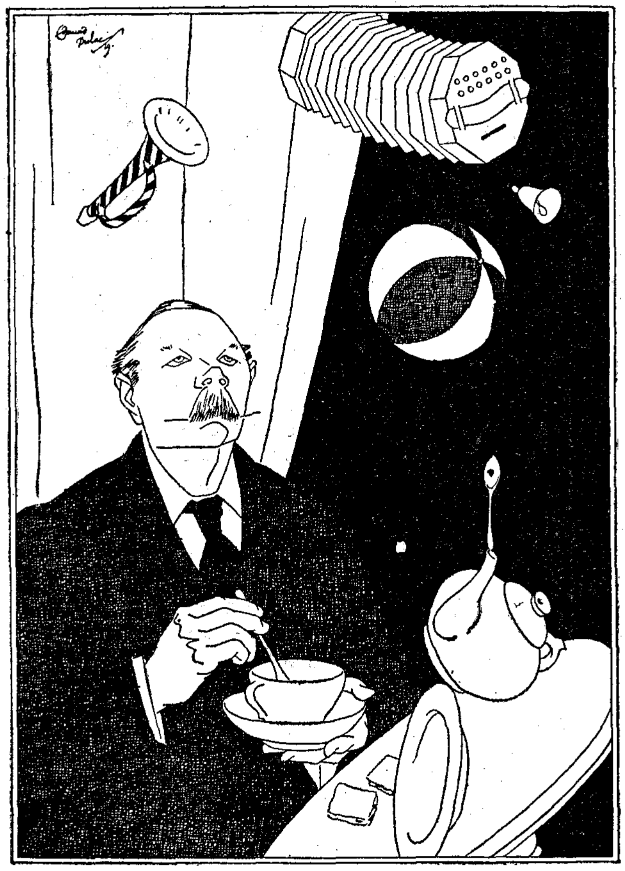
> "This article is not a summons to the Church to support Capitalism any more than a summons to support Socialism or any other economic ism, for such is not the business of the Church; but it is a plea that men who are Christians, before it is too late, shall put forth serious and intelligent effort to build a really Christian social order, without making necessary the deluge of blood and the agony and anguish, without which, it seems, the race has rarely made notable progress."

"The indifference of men of the Church to Sunday-schools, to mission schools, and to the circulation of church papers is contrasted with "the zeal of genuine religious passion" with which the propaganda of the radicals is carried forward. As we read:

> "Your typical churchman may sneer at the methods adopted by the Church to disseminate truth through the printed page, but the radical industriously circulates the publications of his group from house to house, half a million daily. . . . Thousands upon thousands of 'Reds' support their publishing and promoting agencies with a loyal devotion worthy of a better cause and give dollars to the churchman's dimes. . . . . . .
>
> "The patient, continuous processes to which the typical churchman is so indifferent are the only processes by which a rapidly developing force of human purpose and passion can be so directed as to issue in a social order in accord with the ideals of Christ; and these very processes are being used with unabated zeal by the kind of men who would so direct that human force as to accomplish their announced purpose: 'The conquest of political power and the destruction of the *bourgeoisie* state' by 'direct action,' which means the physical uprising of a class against the people, with bombs for weapons.
>
> "Will the men of our churches face the facts and then support and promote the educational activities through which alone can be extended the ideas and ideals which are truly Christian?"

VERDICT OF THE CHURCHES ON SPIRITUALISM

SIR OLIVER LODGE IS HERE on a six weeks' lecture-tour, as he says, to preach no new religion, but to strengthen old ones with new evidence regarding the spirit world. Maeterlinck is also emphasizing the value of what he considers new proofs of immortality. Sir Arthur Conan Doyle and other writers on spiritualism have asserted the Church's duty to accept new evidences of life after death as final and conclusive proof of its own fundamental doctrine of immortality. With the great wave of interest in spiritualism now sweeping over the world, various spokesmen for the Church agree that the organized Christian bodies can not ignore it. One Massachusetts Baptist preacher recently told his congregation that among spiritualists are "millions of thoughtful, earnest, and pure souls who are leaning so strongly churchward that unless soon invited in, they will come crushing into the Church by sheer force of their own weight and momentum." The venerable Baptist preacher, Dr. Russell H. Conwell, recently reported messages from his wife in the spirit world. In view of the high character of these men who have been mentioned and of their appeal to the Church, the editor of *The Christian Register* (Unitarian, Boston), in an endeavor to find out what the response of the Church is likely to be to the spiritualistic appeal, has submitted to a number of representative editors of American church papers of different denominations the following question:



"SEEING THINGS."
(Sir Arthur Conan Doyle.)
"REALLY, MY DEAR WATSON—"
—Dulac in *The Outlook* (London).

> "Does the Christian doctrine of immortality as you believe it imply the power of the departed to communicate with their friends on the earth? If so, do you attach spiritual virtue to such communication?"

In presenting the replies the Unitarian paper notes that "as the interpreters of their denominational life" the editors questioned "may reasonably be regarded as expressing in a degree their churches' opinions, tho it is plain they are speaking their own convictions." Says the editor of *The Congregationalist* (Boston):

> "So far as I know, the Christian doctrine of immortality is not stated with sufficient explicitness in the Scriptures or in the historic creeds either to assure or to preclude the possibility of communicating with departed friends. We are, therefore, not heretical if we believe, at least tentatively, in the possibility of such communications. I would never bar the door to them or seek to discredit the validity of such communications as those to which Dr. Conwell and Sir Oliver Lodge bear witness.
>
> "The spiritual virtue, if any, of such communications is doubtless more clear and serviceable to those who allege that they have received them than to the outsider. I do most strongly believe in the actual presence with us of those who have gone from sight. It is the sense of their nearness rather than anything that we may think they are saying to us which to my mind yields spiritual values. I am glad this whole question is being raised. I would rather believe anything within the bounds of decency and common sense about our dear ones who have left us than to think of them as in the cold ground or at some far corner of the universe, unmoved by what we suffer and enjoy

day by day. The ordinary Christian view of death is so tinged with paganism, fear, regret, and pessimism as to call for a fresh evaluation of the real Christian hope, in order that we may live in the sunshine of it rather than be in bondage all our lives long, as many good Christians are, to the fear of death and the hereafter."

The editor of *The Northwestern Christian Advocate* (Chicago) is more skeptical. He believes "that the slender messages claimed to have got through are but the mental reflections of earnest, yearning inquirers." This representative of the Methodist Episcopal Church concludes that "if we can not base our belief on immortality on the very nature of the mind and the persistence with which we hope for a definite existence," spiritualism would not "add appreciably to the world's happiness."

The editor of the Protestant Episcopal *Churchman* (New York) is also somewhat cautious. While "spirit communication ought to be hailed joyfully as proof of what heretofore we have held to be the goal of faith," he thinks that the evidence at hand "is too slight to warrant any confident assertion," and "it would be unfair to those who are pioneers in this research to draw conclusions from results that we can at present observe." This editor adds a word of warning: "If the early Christian belief in an immediate second coming of the Christ produced an otherworldliness that tended to demoralization, spiritualism, with the privilege it confers of peering into heaven is likely, as it seems to me, to have much the same effect."

The Quaker editor who takes part in this discussion professes an open mind. He does not see "that the doctrine of immortality implies the power of the departed to communicate with us, for they may not have the power to make us hear or understand them." The editor of *The Friends' Intelligencer* (Philadelphia) continues:

"I do not see how such experiences as are described in the "Life of William T. Stead," or by Sir Oliver Lodge and William James, can reasonably be ignored, or regarded as mere fiction or delusion; but having myself had no such experiences, I can only say, in the words of the poet,

"Open our eyes, that we that world may see;
Open our ears, that we thy voice may hear."

The observations of the representative of the Baptist Church, the associate editor of *The Watchman-Examiner* (New York) as to the effect that the belief in spiritual communications has upon those who hold it incline him to the conviction not only that there is no spiritual value in it, but that just the contrary is true. He says:

"The world has yet to learn the first new truth or to witness the first illustration of higher and holier living from these so-called spirit communications. If we may judge from the nature of the 'messages' which are reported to us as coming from the other world that world must be less intelligent than this, and its inhabitants singularly lacking in the appreciation of and the power to minister in things really important. It would seem as if there should be ministries for the spirits of the departed more worth while than the tipping of tables, and the disclosure of the whereabouts of lost articles, and the retailing of the puerile chit-chat which form the substance of most of these pretended revelations. The 'orchard test' is valid here as elsewhere: 'By their fruits shall ye know them.'"

A similar opinion is held by the editor of *The Reformed Church Messenger* (Philadelphia), who does not believe that anything really helpful "for those who remain" has been directly communicated in any spiritualistic seance, and he observes that "those most actively interested in this propaganda have not usually been known for extraordinary zeal in the development of Christ's kingdom." In fact, most of them "appear to have become victims of a fatal fascination which has rather made them notorious for uncanny methods, queer conduct, and the propagation of trivialities than wholesome and helpful as leaders in the upbuilding of a better world here and now." This writer concludes: "As seekers after truth we dare not reject any scientific evidence; but I am inclined to agree with the Bishop of London that it is difficult to overrate the physical, mental, and moral danger that may be involved in tampering with any form of spiritualism."

Dr. Frederick Lynch, editor of *Christian Work* (New York), who is selected to represent the Presbyterian Church, says his own feeling is that "while it is perfectly natural to seek communion with those whom we have loved, and while there is no reason in the world why we should not talk with them if they are near to us, being, as we are, immortal souls and living in eternity, not time, yet the means of communication and the machinery of contact are as yet so imperfect it had better be left to the scientists for a time and made a matter of scientific research rather than of religious faith." Dr. Lynch continues:

"As matters stand now, the evidence for spiritualism seems stronger than before the war; and there is no doubt that many of the experiences recently related must be treated with great seriousness and can not be lightly brushed aside. The dead do seem to come back, and they are very sensible men to whom they seem to have come. On the other hand, the evidence is still so shadowy, the messages that have come are so unimportant—with a few exceptions, the séances are so lacking in that great and solemn dignity that one associates with death and resurrection, that we are all justified in waiting before accepting spiritualism as a religion. For our own part, we just simply can not conceive of the great and beloved dead we have known exercising themselves with table-rappings, and planchettes, and the usual modes of séances. If they can come, they can come greatly, wonderfully, beautifully, divinely, clothed in glory as when they lived."

The editor of *The Universalist Leader* is somewhat non-committal, his attitude being summed up in these words:

"The material testimony for communication so far adduced is unfortunately so crude and trivial as to furnish small satisfaction, obscuring more than is revealed; and yet in a way revealing the existence of a something beyond all we now know."

It will be noticed that there is no representative of the great Catholic Church in the above symposium. We have at hand, however, an editorial from *The Pilot*, official organ of the archdiocese of Boston, written in anticipation of the Boston lectures on spiritualism by both Maeterlinck and Sir Oliver Lodge. But we are reminded that all the works of Maeterlinck have been placed on the list of books which Catholics are forbidden to read, and the view-point of the Catholic Church toward the new revelations is thus clearly and emphatically exprest:

"The doctrines of spiritism as outlined by Sir Oliver Lodge and Sir Arthur Conan Doyle are irreconcilable with the doctrines of the Catholic faith. The Christian idea of God as the great Remunerator who rewards the good and punishes the wicked is rejected. The divinity of Christ is not admitted; heaven and hell are abolished, and the whole structure of religion is assailed.

"Spiritism is to-day not a scientific system, if we can predicate the word 'scientific' about a system which is founded on such inconclusive evidence, but a religious cult. As such it has come under the condemnation of the Church. Catholics are prohibited by a recent decree from dabbling in spiritism."

THE WOMAN PREACHER IN THE SYNAGOG—The female Jewish rabbi is not likely soon to become popular, even in the most advanced circles of Jewry, believes the London *Guardian*, altho it reports that for the first time possibly in the history of the Jewish race a woman has preached in a synagog. *The Guardian* sees in the incident "an encouragement to those in the Church of England who do not believe that the earth will open to swallow women preachers, simply because they are women," and continues:

"It is a curious speculation whether the preacher or the congregation experienced the stranger emotions. We are assured that the Cambridge synagog at which Mrs. Salaman recently expounded verses 24 to 28 of the thirty-second chapter of Genesis is attended by a strictly orthodox congregation—the thing that might have been less surprizing had it been the work of a coterie of liberalizing Jews sitting lightly to the Hebrew creed. The alteration of a very few words would have made Mrs. Salaman's address an excellent little Christian sermon."

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CURRENT - POETRY

THE interest in "the unknown shore" manifested so strongly in England by resort to the means of alleged spirit communication has naturally appeared in the verse current to-day. The conception of the unknown shore, too, will be seen widely differing from the old-time theological conception of heaven. A poem appearing in a recent volume of English verse called "The Splendid Days" (Blackwell) recalls in its sincerity and sympathy with young life the famous "Spires of Oxford," by Miss Letts, published in the early years of the war:

DEATH

By M. W. Cannon

Lord, since you let him die and did not save
My own dear Love for me,
And since my heart has gone to him
Over in Germany,
I only have one prayer to make
To you for him and me.

That you will give him in your heaven
(Dear Lord, I know him well),
Neither the harps nor floors of gold
Of which I have heard tell,
Nor jasper nor onyx palaces,
Nor fields of asphodel.

Give him some windy seaport town
With cliffs and tumbled shores,
And a swift boat with big brown sails,
And a great pair of oars;
And a wind sweet-scented from the load,
And the sun bright on gray tors.

Another poem from a feminine writer touches the loss of some friend or lover or brother. But the thought of the unknown shore is too immense to realize and seems only implied, in this from *The New Witness* (London), in its contrast to the familiar "trifles" that make up daily life:

GREAT AND SMALL

By Edith Dart

Strange! how the trifles sting
In the face of a greater thing:
Death. And it is not the ache
Of our hearts nigh to break
That is hardest to bear—
But the thought that now ne'er
Shall he know again
Spring flowers and the rain,
The look of green grass
Where the little winds pass,
Or the gold crocuses bloom
When they pierce earth's womb:
Small things of the day,
Silly jokes saved to say
When he came. Never more
Shall his hand on the door
Stir our hearts, make us glad
In the swift way he had,
He alone, when he smiled
Like a big, happy child.
Strange! how the trifles sting
In the face of a greater thing.

Whether, aside from Mr. Maeterlinck, the unknown shore is without interest for the masculine mind, it so happens that, in current treatment of the thought among us, again the author is a woman. In the January *Scribner's* appears a poem where the spirit world is invoked with the aid of Norse mythology:

THE CHILD TO THE GHOST OF KARIN

By Frederika Peterson Jessup

O Karin, little Karin, the moon is on the lake,
And I want thee to tell me which of three paths to take:
The path that leads to Everyday, the way of panting breath,
The path that leads to Fame's realm,
Or the path that leads to Death.

I am his little daughter, and I love thee as he did,
And I am come to call thee, to do what thou dost bid;
For thou smilest in the moonbeams, and thou weepest in the rain,
And thou art Friggs's own messenger
That passes through the grain!

O Karin, little Karin, tho tiny I may seem,
I am brave as is a mother and swift as is a dream—
I am ready, little Karin, to step upon the way
That leads to joy or sorrow
Or back to Everyday.

So answer, little Karin, and say what Life may bring
And if I may but weep and if I may but sing,
And whisper in thy ghost-voice the path that I most tread,
Be it with or past the living
Or upward to the dead.

. . . .

Thou hast answered, little Karin, and my Viking blood is free:
I will take the moon's gold pathway that shall guide me up to thee,
I will take the path that glitters, but is only and apart—
The path of bliss and anguish
That awaits the lonely heart.

Three or four poems from a little volume of "Poems" (Macmillan) recently published by friends of Gladys Cromwell have an interest in this connection because death was sought by her and her sister Dorothea in the sea. Suffering from the mental breakdown following overwork in canteen service at the front, they leapt from the deck of the *Lorraine* on their journey home. There is no morbid preoccupation with death in the verse of Gladys Cromwell, but one poem, fine as a lyric, touches the subject with the strange impersonal note of the intellect rather than the feelings; something after the metaphysical school of John Donne:

THE MOLD

By Gladys Cromwell

No doubt this active will,
So bravely steeped in sun,
This will has vanquished Death
And foiled oblivion.

But this indifferent clay,
This fine, experienced hand
So quiet, and these thoughts
That all unfinished stand,

Feel death as tho it were
A shadowy caress;
And win and wear a frail
Archaic wistfulness.

Eight months in canteen service of the Red Cross near Châlons won for these sisters the title of "Twin Angels." It was their first encounter with realities, being reared in a home of wealth, but the puzzle of life such as theirs presented itself to their minds. In a biographical note Miss Anne Dunn writes: "They found their home in the unseen. In the outer, material world they existed only by an effort that cost them much, for they moved as spirits, untouched by crude desires; bending with a shy longing to meet human needs; searching for some solution that should justify their personal immunities, their money, and the grace and luxury to which they had been born." Two poems seem to show the challenge of the spirit to the unreason of their world:

REALIZATION

By Gladys Cromwell

There is one syllable that stirs me: War!
I picture what the mortal strife must be
Of Nations clad in youth and bravery.
I hear the voice of human anguish more
Compelling than it ever was before.
Across the universe, beyond the sea,
New life is spilled into infinity,
And the waves tell it moaning on our shore.
How comes it bleaker sorrow I can bear;
The combat starkly drawn, a street, a square
Away? The souls entrenched in frigid line
To fight for purposes no kings define;
For purposes as grim to them as life?
God, let me apprehend this nearer strife!

The opulent and the powerful possess much of the Earth, but Earth itself, with its "endless birth of wonder," is not theirs, but is for the poet and the humble who possess, perhaps, little else:

DOMINION

By Gladys Cromwell

Patrician overthrown,
What lyric powers oppose
The dogmas you intone!
You still would be of those
Who rule by "willing"?—No.
Chaos within, I say,
Compels your star to glow
With fixt complacency.

When a bright star shall dance,
'Twill be from lowly fires
That sting your arrogance!
Among the patient choirs
Of Heaven, old Earth maintains
Her meaning. Dare to call
Her measure prose! Her strains
Are immemorial

Earth gives you patronage.
Yes, *you*, who have surpassed
Her human heritage
Of wisdom, the meek past
Enshrouds and swaddles. Are
You free? The Master?—Yes—

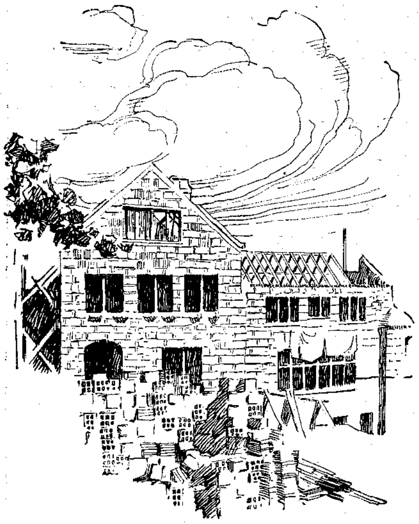
Imperial, titular;
But Earth you can't possess!
—Old Earth—old, constant Earth,
In whom is dancing thought
And song and endless birth
Of wonder—Earth, so old,
Yet still so new with years
That none her sway shall hold
Except the lyric seers.

When I Build *my* Home!

HOW many times you have said it in speaking of your cherished home—but usually of the unique floor plan, the decorations, the furnishings, and the many other personal conveniences and comforts you would have rather than the building material you would use. That was a secondary consideration—if it was a consideration at all.

Exterior beauty, durability of construction and economy of maintenance are even more important attributes of the home.

If the interior of your ultimate home is beautiful and gives full expression to your personal preferences—something to be enjoyed all through the years which follow, then should not the exterior walls be equally beautiful and at the same time be built of an enduring material which will fully protect and preserve the interior? Stucco, Brick, or Stone over walls of



HOLLOW TILE

The Most Economical Form of Permanent Construction

provide exterior beauty and enduring protection as no other building materials can.

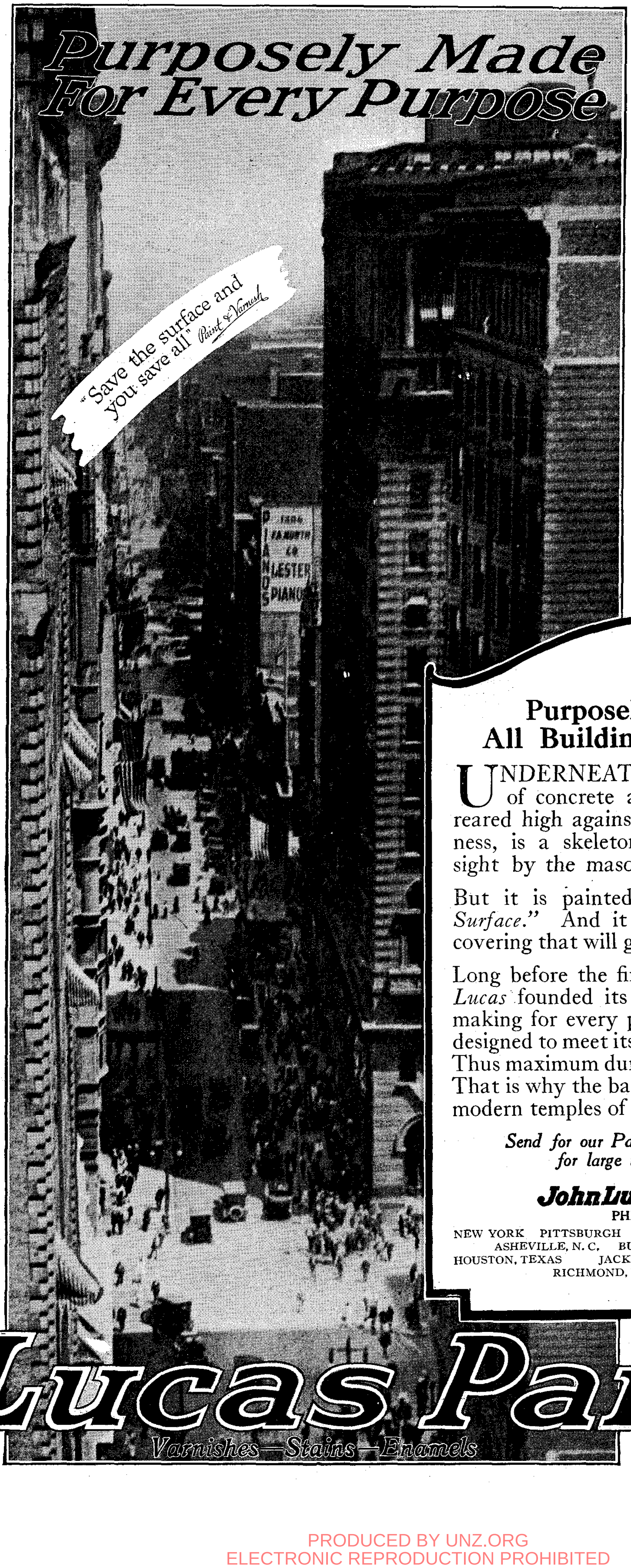
In planning a home the average builder does not seem to realize fully that physical comforts are dependent to any extent on the building material used—that the walls of a house play a part more important than mere protection.

Homes with walls of Hollow Tile have many decided advantages, economies and comforts not possible in homes with walls of ordinary construction. They are much cooler in summer and more economically heated in winter—due to the two or more dead air spaces in each unit of the wall—and for this same reason they are always free from dampness. Their first cost is practically the same as that of well-built frame buildings—and it is the last cost. Hollow Tile houses are permanent and do not require constant repairing and painting to stay depreciation—expensive items which must be counted these days. They are fire-resistive and carry a low insurance rate.

Our new book, "HOLLOW TILE FOR THE HOME," will tell you more about this economical and permanent building material. It is illustrated with actual photographs of Hollow Tile homes built in every part of the country. If you are planning a home, this free book will give you much good building advice and many valuable plan suggestions.

And when you build of Hollow Tile be sure that your local lumber or building material dealer furnishes "MASTERTILE." Hollow Tile so trade-marked is the product of a member plant and indicates material manufactured in accordance with rigid Association standards. It is your protection; insist on getting it.

THE HOLLOW BUILDING TILE ASSOCIATION
Representing America's Leading Manufacturers
By this trade mark **MASTERTILE** you shall know it
111 WEST WASHINGTON STREET, CHICAGO, ILLINOIS


Purposely Made For Every Purpose
"Save the surface and you save all" Paint & Varnish
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Lucas Paints
Varnishes—Stains—Enamels

Purposely Made for All Building Construction

UNDERNEATH these up-piled masses of concrete and brick, that man has reared high against the sky to house business, is a skeleton of steel, hidden from sight by the masonry which surrounds it.

But it is painted, always, to "*Save the Surface.*" And it must be coated with a covering that will give maximum durability.

Long before the first skyscraper was built, *Lucas* founded its business on a policy of making for every purpose a paint specially designed to meet its particular requirements. Thus maximum durability is always assured. That is why the backbone of so many of our modern temples of industry is *Lucas* coated.

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EDUCATION · IN · AMERICANISM

Lessons in Patriotism prepared for THE LITERARY DIGEST *and*
especially designed for School use

THE FRENCH IN AMERICA

THE FRENCH IN THE UNITED STATES—The many characteristic differences that exist between the French in Canada and the French in the United States may be loosely ascribed to the fact that the French in Canada have in the great majority been born there, while the French in the United States have been born in France. This difference of birthplace involves disparities resultant from environment and tradition. In the earlier building of the United States and Canada, the record of French exploration and settlement forms a brilliant chapter in the history of each country. In these days there are practically no French colonies in the United States. The French live about in various cities and in sections of these cities among native Americans or persons of other nationality. They are not to be distinguished on the ground of their location. Moreover, French authorities inform us that it is not instinctive among the French to segregate themselves. They differ from some other races in not having social and cultural societies that hold them together as separate units. It is true that there are certain societies made up of French people from particular districts of France; and the Alsace-Lorrainers have long had such a society. Then there are organizations in this country, such as *L'Alliance Française* and *L'Institut Français aux États-Unis*, which are chiefly devoted to the interests of English-speaking people who have a taste and desire for French culture.

OCCUPATIONAL LIFE—By far the greater number of the French in this country are engaged in skilled lines of work and in commercial and professional life. One industry in which the French are notably important and influential is the silk industry, which draws a large French population to such silk centers as the city of Paterson in New Jersey. In California there are many French established as owners and workers of farms and vineyards. In the New England States numbers of French and French-Canadians are engaged in industrial centers. Before the war, the records showed a large French population in many cities, among which may be mentioned New York, Chicago, San Francisco, New Orleans, and Boston. New Orleans is not the great French center it was in years gone by. As one authority puts it, among the cities having a French population of more than five thousand before the war, New Orleans ranked as the eighteenth. Yet it is pointed out also that as far as speaking French is considered, many inhabitants of New Orleans of French descent still employ the French language with facility tho they have long been Americans. New York had the largest French population before the war and Fall River came next. It is remarked also that the French-Canadians tend to settle in manufacturing sections, while the French, strictly such, abide in the larger cities. The greatest number of French-Canadians is to be found in the New England States. Except in the case of old people who came in contact with American life when past the age of learning, all the French here may be said to have a command more or less fluent of the English language. The immigration of the French to the United States has been one of moderate but regular proportion, and there has never been in modern years any great influx at one time. The tide ran the other way, of course, when France needed her men for war; and it is said that very few sought to evade the call. The fear of German invasion, on which they had grown up, was at last realized, and, except in a negligible minority of cases, was sufficient to send them back to France without the additional spur of the heavy penalty attached to shirking. Some of these, of course, returned. Some French informants here think that there will be an exceptional movement of French emigrants to this country as one of the developments of war. It is felt that besides the opportunities the United States offers, with which contact with the American soldier has made the French acquainted, there are the additional impulse to escape the enormously high cost of living in France and the general delay and trials of reconstruction. On the other hand, this view is met by the statement that France was never dearer to the French than it is to-day, won from the brink of annihilation by most brilliant feats of arms. What is more, France suffers from insufficient population, which is a constant topic of the press and official statements.

ASSIMILATION OF THE FRENCH—While the French are molded into American institutions very easily, they do not in general, it is said, incline to forswear allegiance to France and become naturalized American citizens. They have a great admiration for American institutions, and they know how closely France and the United States are kin in the relationship of republican government. But their children born here, on the other hand, grow up as thoroughly American as they are born. So much is this the case that a difficulty found in some French families, we are told, is to have the children preserve their knowledge of French. Not infrequently it happens that while children can understand their parents when addrest in French, they are incapable of responding in that language because they have no opportunity to talk it outside their own home. Thus results an odd contrast; while many Americans have made it a cultural ambition to have their children learn French from childhood, many French people have found their children more or less unconsciously abandoning French for the exclusive use of English.

THE FRENCH IN CANADA—The French-Canadians are settled mostly in the province of Quebec. There are a few scattered throughout the maritime provinces. Most of these are distinguished from those in Quebec by being known as Acadians. They are descendants of the original French settlers of Acadia, which included Nova Scotia and a large part of New Brunswick. In northern Ontario, a small section of Manitoba, and in various spots throughout the prairie provinces, there are French-Canadian settlements. Their language and their religion keep them segregated in communities. According to the census of 1911, 2,054,890 French-speaking people were in Canada, but most of them are Canadian-born. All of these are Catholics. The total Catholic population of Canada in 1911 was 2,833,041, or 39.31 per cent. of the total population.

With regard to occupations, the French-Canadian is primarily an agriculturist. He clings to the soil. In 1917 the total value of the field crops in Quebec was $153,000,000 as compared with $251,000,000 in Ontario.

In 1917 Quebec had—

Horses	379,276
Milch cows	911,023
Other cattle	958,010
Sheep	849,148
Swine	712,087

Quebec leads all the provinces of Canada in this field of production with the exception of Ontario. At the same time the French-Canadians are expert lumbermen, because of Quebec's timber wealth. The major portion of the pulpwood produced in Canada at the present moment is produced in the province of Quebec. This was also true for many years of timber and lumber, as may be judged from the following figures. Of the

(*Continued on page* 83)

WORLD-WIDE-TRADE-FACTS

SUGAR-PRODUCTION, AVAILABLE SUPPLY, AND PRICES

(*Bradstreet's*)

The production of cane-sugar in the United States for the year 1918–19 is estimated at 569,000,000 pounds and of beet-sugar at 1,530,000,000 pounds, indicating a total production of about 2,100,000,000 pounds, according to the Department of Commerce. This production, with the imports from foreign countries and the receipts from non-contiguous territories, gives a total of approximately 9,855,000,000 pounds available in the markets of the United States. Deducting from this amount the exports from continental United States of domestic sugar, 1,057,000,000 pounds; the reexports of foreign sugar, 3,017,000 pounds; and shipments to non-contiguous American territories, 5,242,000 pounds, makes in round numbers the net amount retained for consumption in the United States, 8,790,000,000 pounds. This works out an average per capita consumption of 82 pounds in 1919, against 86 pounds in 1915, the first year of the war, and 89 pounds in 1914, the last year before the war.

The average import price of sugar was 2 cents a pound in 1914, 3.7 cents in 1916, 4.8 cents in 1918, and 5.3 cents in 1919. This is an increase of 163 per cent. in 1919 over 1914. The average price per pound of sugar from Hawaii was 3 cents in 1914 and 6.2 cents in 1919, and from Porto Rico, 3.1 cents in 1914 and 6.8 cents in 1919. The average export price of sugar was 3.6 cents per pound in 1914, 4.9 cents in 1916, and 7.3 cents in 1919. The price of imported sugar is based on the wholesale price in the country from which imported, while the export price is based on actual cost at time of exportation at ports from which shipped.

TRADE OF THE UNITED KINGDOM

(*The Americas*)

Comparative figures are given in the following table of the trade of the United Kingdom by months for 1917, 1918, and 1919:

IMPORTS

	1917	*1918*	*1919*
January	£90,592,967	£98,995,772	£134,518,054
February	70,947,686	99,029,078	107,073,399
March	81,145,870	107,223,220	105,772,289
April	84,532,766	119,881,043	112,210,747
May	87,625,713	125,907,284	135,657,051
June	86,078,742	101,544,719	122,945,655
July	90,124,819	109,139,238	153,140,032
August	100,557,618	110,179,501	148,832,393
September	86,272,433	97,995,688	148,625,074
October	94,258,263	117,629,803	153,486,162
November	109,753,091	116,770,580	143,564,880
December	84,769,722	116,243,378	....
Total	£1,064,161,078	£1,316,150,903	....

EXPORTS

	1917	*1918*	*1919*
January	£46,860,542	£41,665,935	£47,342,943
February	37,287,486	39,099,481	46,914,681
March	44,111,131	36,002,315	53,108,496
April	38,799,466	40,071,466	58,482,249
May	43,437,256	44,967,221	64,344,542
June	43,651,663	45,026,231	64,562,346
July	49,833,635	43,644,398	65,315,422
August	49,803,715	43,522,237	74,773,278
September	43,244,194	40,152,143	66,500,395
October	50,757,054	42,820,724	79,060,892
November	43,382,335	43,218,879	87,109,979
December	37,140,514	38,282,035	....
Total	£527,079,746	£501,418,997	....

FIUME AS A SHIPPING POINT

(*Bradstreet's*)

Statistics for 1912, the latest available, show that 9,329 steamships of 2,564,665 tons arrived at the port of Fiume, and that 9,246 of 2,597,212 tons departed. Of this number, 16 per cent. represented the small coasting trade, while 84 per cent. was long coastwise trade and Atlantic navigation. The entire movement by sea was 878,360 tons imported and 1,097,400 tons exported, and by land 1,238,000 tons imported and 610,000 tons exported. The following countries were concerned in this trade:

	Imports from— Tons	*Exports to— Tons*
Origin—By Sea		
England and colonies	291,800	246,300
Austria	121,810	173,500
Italy	105,520	211,600
United States	62,380	84,000
Other countries	296,850	382,000
Total	878,360	1,097,400
Origin—By Land		
Hungary	956,200	470,000
Austria	222,000	110,000
Bosnia	44,800	6,000
Other countries	15,000	23,900
Total	1,238,000	610,000

WORLD COPPER PRODUCTION (IN MILLIONS OF POUNDS)

(*The Annalist*)

	—Production of World—		
	Actual Figures	*Equalized Figures*	*Production of United States*
1885	505.6	450.0	165.9
1886	486.5	477.3	156.7
1887	499.3	506.3	180.9
1888	578.2	537.0	226.4
1889	585.4	569.6	226.8
1890	604.2	604.2	259.8
1891	617.6	640.8	284.1
1892	681.5	679.7	345.0
1893	685.0	720.9	329.3
1894	727.7	764.7	354.2
1895	749.5	811.0	380.6
1896	847.7	860.3	460.1
1897	910.1	912.6	494.1
1898	972.8	967.8	526.5
1899	1,049.8	1,026.5	568.7
1900	1,083.4	1,088.8	606.1
1901	1,167.4	1,154.8	602.1
1902	1,196.2	1,224.8	659.5
1903	1,390.2	1,299.0	698.0
1904	1,528.3	1,378.7	812.5
1905	1,540.9	1,462.3	888.8
1906	1,577.4	1,550.9	917.8
1907	1,596.4	1,644.9	869.0
1908	1,671.2	1,733.5	942.6
1909	1,884.4	1,840.4	1,092.9
1910	1,934.5	1,952.6	1,080.2
1911	1,939.5	2,070.6	1,097.2
1912	2,229.6	2,190.0	1,243.3
1913	2,209.7	2,330.0	1,224.5
Total 1885 to 1913	33,450.0	33,450.0	17,693.6
1914	2,049.5	2,471.3	1,492.8
1915	2,389.2	2,621.2	1,787.7
1916	3,100.4	2,780.2	2,412 4
1917	3,165.2	2,948.8	2,519.4
1918	3,075.8	3,127.6	2,489.7
Total 1914 to 1918	13,780.1	13,949.1	10,702.0

RESERVES OF EIGHT PORPHYRY COPPER-MINES AS OF DECEMBER 31, 1918

Mine	*Total Tons of Ore in Reserve*	*Grade, P. C. Copper*	*Total Contained Copper in Millions of Pounds*
United States:			
Utah Copper	374,040,000	1.37	10,248.7
Ray Consol	86,383,642	2.06	3,559.0
Chino	95,580,737	1.63	3,115.9
Inspiration	82,725,246	1.63	2,696.8
Nevada Cons	68,549,644	1.57	2,152.5
Miami	54,570,000	1.47	1,604.4
South America:			
Chile Copper	697,510,349	2.12	29,574.4
Braden	263,506,356	2.26	11,910.5
Total	1,722,865,974		64,862.2

The total reserve of 65,000,000,000 pounds of metal corresponds to about twice the total amount mined during the twenty-nine years from 1885 to 1913, inclusive. At the present rate of consumption, however, it would supply requirements for only about thirty years. Moreover, if future needs increase as rapidly as in the past, this reserve would supply the needs of less than fourteen years.

The total amount of copper in reserve in developed ores throughout the world is much greater than 65,000,000,000 pounds. During the war we supplied about 75 per cent. of the total new copper produced, and in the year 1918 more than 80 per cent.

BELGIUM'S INDUSTRIAL RECOVERY

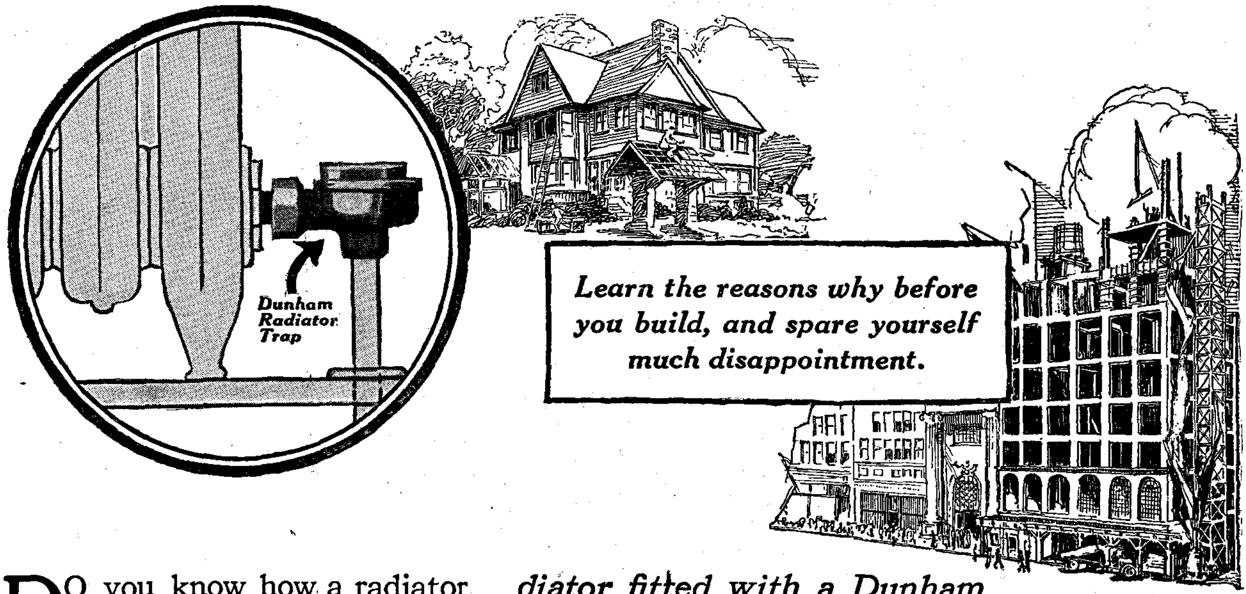
(*The Americas*)

PRODUCTION IN MAY, JUNE, AND JULY, 1919

INDUSTRY	Monthly Prod'tion	May, 1919	Percentage Attained	June, 1919	Percentage Attained	July, 1919	Percentage Attained
Coal	1,800,000[1]	1,100,000[1]	60	1,260,000[1]	70	1,600,000[1]	83.5
Coke	125,000[1]	53,459[1]	42	53,935[1]	43	58,007[1]	46.41
Cement	73,000[1]	8,772[1]	12	18,013[1]	24	27,063[1]	37.07
Blast-furnaces	210,586[1]	4,065[1]	1.9	14,651[1]	6.9	41,199[1]	19.56
Iron & steel (finished)	154,821[1]	8,653[1]	5.5	14,667[1]	9	26,050[1]	16.83
By-products	127,075[1]	3,491[1]	2.7	12,113[1]	9.1	16,809[1]	12.72
Steel for converters	182,681[1]	8[1]	0.04	8,612[1]	4.7	11,000[1]	6.02
Martin steel	17,717[1]	7,579[1]	42	8,524[1]	48	11,606[1]	64.50
Steel (electric)	....	58[1]	....	....	....	....	....
Special steel	....	145[1]	....	....	....	....	....
Raw zinc	16,800[1]	71[1]	0.4	540[1]	3	1,641[1]	9.77
Refined sugar	9,206,967[2]	8,583,033[2]	93	9,875,991[2]	106	8,456,150[2]	91.84
Cotton for spinning	1,705,000[3]	500,000[3]	29	700,000[3]	41	750,000[3]	44.12
Cotton for weaving	42,000[4]	500[4]	1.2	....	....	....	....
Flax for spinning	375,000[3]	38,000[3]	10.5	57,492[3]	15	107,979[3]	28.79
Flax for weaving	11,000[4]	....	....	....	....	....	....
Paper & cardboard	11,528[1]	2,398[1]	20	2,812[1]	24	4,538[1]	30.70

[1] Tons. [2] Kegs. [3] Spindles. [4] Looms.

The Most Important End of a RADIATOR



Learn the reasons why before you build, and spare yourself much disappointment.

DO you know how a radiator works? Steam entering a radiator, gives up its heat, turns to water: unless this water can escape, the steam will compress the air already there. In the average radiator, attached to a one-pipe system, the steam rushes in and begins to shove out the air and water. The water is supposed to run down the same pipe up which the steam is racing: the air should escape through the air valve. You know what happens —a bedlam like a boiler factory, with air and water hissing and spitting from the air valve.

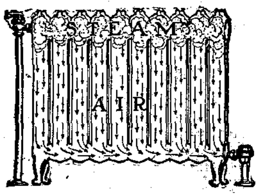
A two-pipe system, with radiators fitted with the Dunham Radiator Trap, never knocks, spits, leaks or hisses. The Dunham Trap automatically opens and lets out the water and air. Then when the radiator is hot all over, it automatically closes and keeps the steam in. All works quietly, efficiently.

Insist that your architect specify a two-pipe system and *every radiator fitted with a Dunham Radiator Trap.* Then you will have a heating system which will heat up quickly, quietly with low pressure steam and give you most heating comfort per ton of coal.

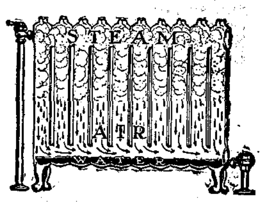
Leading architects and builders have recommended the Dunham Trap as standard equipment for nearly fifteen years. It is used exclusively in the Woolworth Building, and in all apartments, hotels, offices, public buildings, institutions and factories where the best is the standard. Of all the two-pipe heating systems installed in Government Buildings during the war period, eighty percent were Dunhamized.

Existing steam heating systems can be Dunhamized. Tell us the type of building you are interested in Dunhamizing and we will send you booklet giving full information, also the address of the nearest Dunham Service Station. Special technical bulletins are available for all who need them.

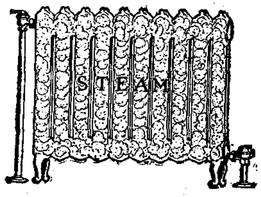
The 100% Radiator



Steam entering—air passing out through Dunham Trap.



More steam entering—water (steam that condensed from chill of radiator) and balance of air passing out through Dunham Trap.



Radiator full of steam and hot all over. The Dunham Trap that allowed free passage of air and water, does not allow the escape of steam. It permits radiator to work at 100% efficiency.

The DUNHAM
REG. U.S. PAT. OFF.
HEATING SERVICE

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The result of the made-to-order principle

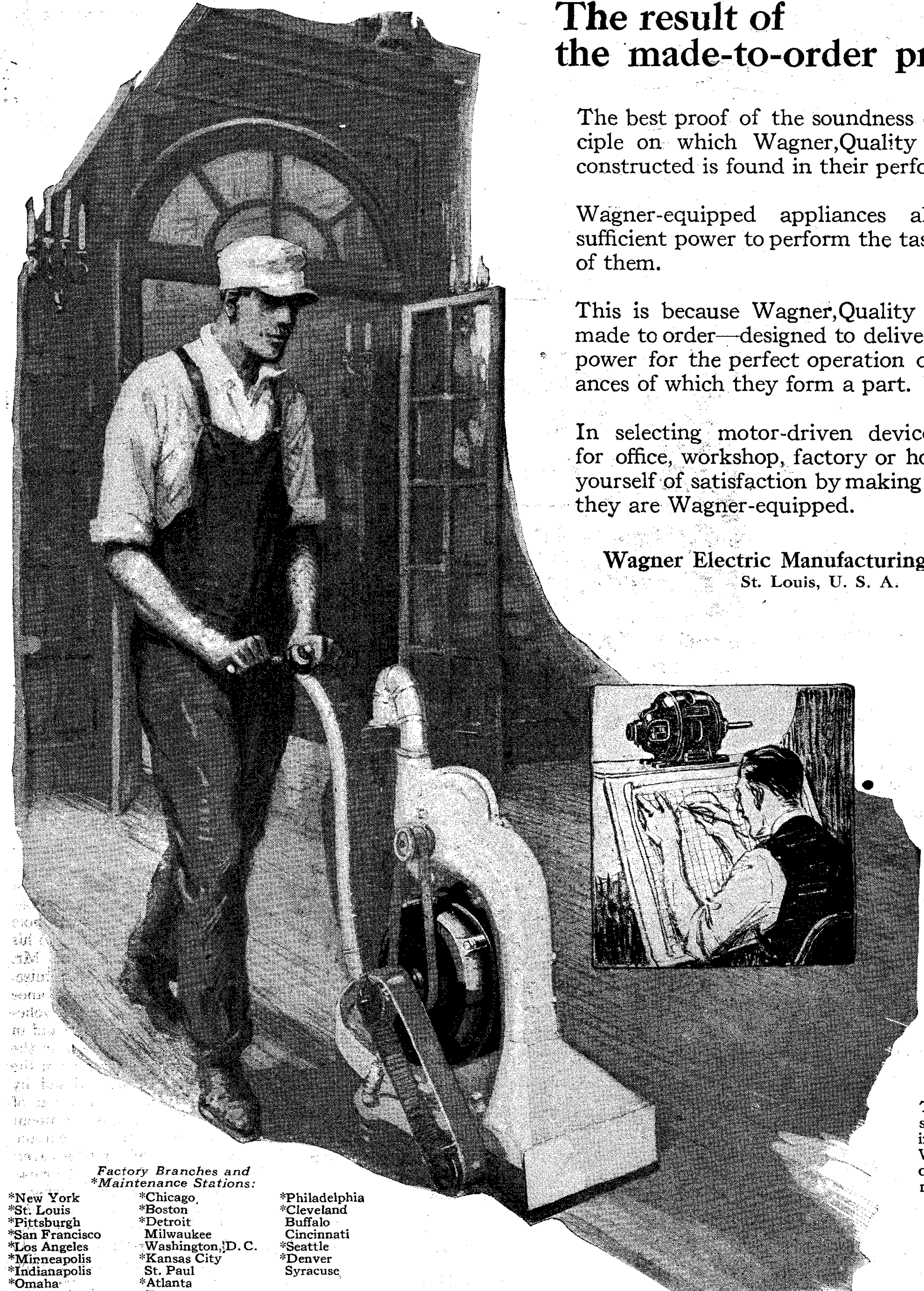
The best proof of the soundness of the principle on which Wagner,Quality Motors are constructed is found in their performance.

Wagner-equipped appliances always have sufficient power to perform the tasks expected of them.

This is because Wagner,Quality Motors are made to order—designed to deliver the proper power for the perfect operation of the appliances of which they form a part.

In selecting motor-driven devices—whether for office, workshop, factory or home—assure yourself of satisfaction by making certain that they are Wagner-equipped.

Wagner Electric Manufacturing Company
St. Louis, U. S. A.



The illustration shows a typical installation of Wagner Motors on floor-surfacing machines.

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**Maintenance Stations:*

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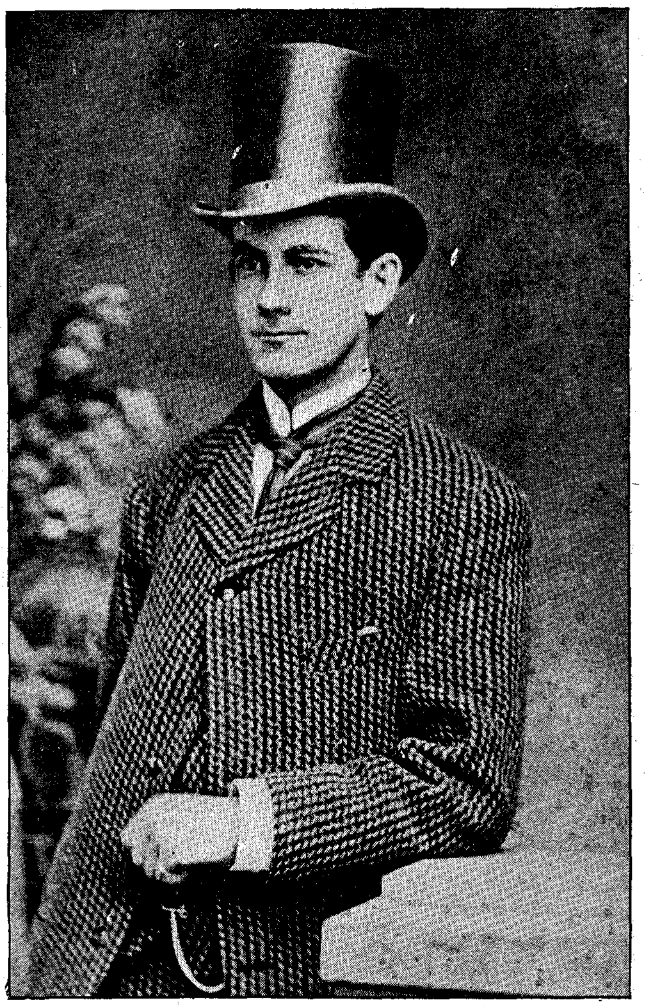
PERSONAL GLIMPSES

BRYAN WAKING UP THE SLEEPERS AGAIN

THE WEARY DINERS WERE THINKING wistfully of the downy couch at the late hour when Bryan arose to utter the thoughts that were in him at the recent Jackson-day banquet in Washington. The program had dragged terribly, making Bryan several hours late, and it was only with an effort that those assembled "awoke from their state of more or less bored semicoma enough to give the old leader a more than perfunctory greeting," we are told. But when he had finished his remarks, at 2:30 A.M., a greatly surprized and highly excited bunch of select Democrats drew a long breath, and, after having recovered some measure of their equanimity, decided not to go to bed, but to devote the rest of the night to a discussion of the "Peerless One's" sensational speech and its significance. They had been worked up to a pitch where sleep was impossible. It was "some speech," that Jackson-day address, and it has made "some stir" in the land. Among other things it demonstrated the amazing ability of the irrepressible Mr. Bryan to "come back," whenever a reasonably psychological moment arrives. It showed that the Democratic leader has lost none of that marvelous spellbinding power which first brought him into the limelight with his "cross-of-gold and crown-of-thorns" speech in 1896. It is even said that his recent effort surpassed that one nearly a quarter of a century ago, which up to now has generally been conceded to be the "farthest north" in political speech-making pyrotechnics. The Washington correspondent of the New York *Post* gives a vivid account of Mr. Bryan's entrance to the banquet-hall, where the celebrants were then all ready to "call it a day," having sat through several hours of a somewhat dull function; of the subtle manner in which the speaker aroused their lagging interest; and of the uproar that arose when they finally gained the full import of what they were listening to. We read:



IN HIS STUDENT DAYS.

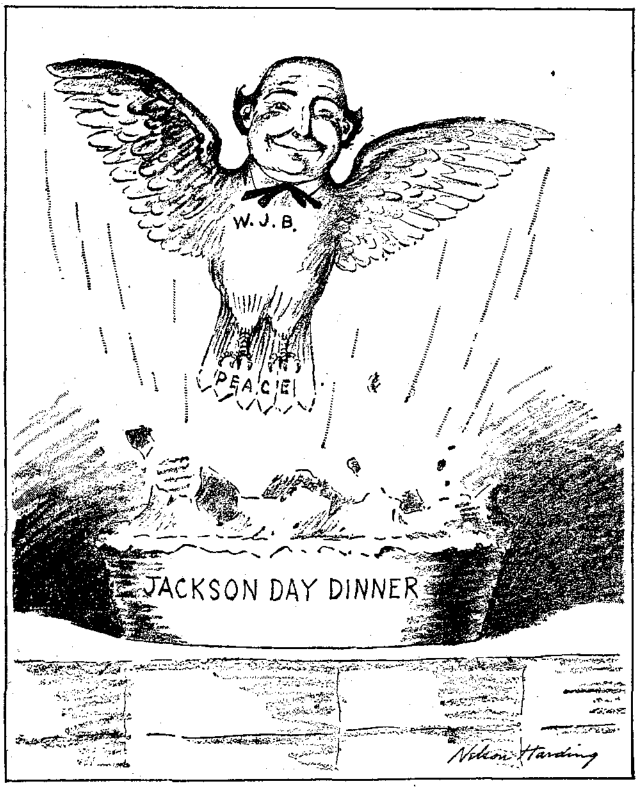
Forty years ago, as a Junior in Illinois College, Jacksonville, Ill., Mr. Bryan looked like this. The hat is a white silk tile, worn according to the custom of college Juniors in Illinois at that time. The original picture, from which this copy was made, belongs to Miss Susan Draper, a cousin of the Commoner.

> Mr. Bryan felt his way with unexampled adroitness and subtlety. He began the business of gradual ingratiation with the audience with the art of which he is a consummate master, at the same time injecting the note of belligerence like the motif of a musical composition, almost imperceptibly at first, and growing gradually louder and bolder. He was humble, obsequious, apologetic. He apologized for the lateness of the hour and slyly compared himself to a superannuated preacher who is called on merely to pronounce the benediction on a performance of which the real business is already concluded.
>
> With a great guile and in much self-depreciation he referred to himself as a "dead politician" and allowed the audience in its imagination to contrast him with the living politicians present, and especially the living politician in the White House.
>
> Considering the part he was going to play, and that he knew he was going to play, it was a superb example of the emphasis of understatement. By a flattering reference to Champ Clark he made a bid for reconciliation and support from the large number of Mr. Clark's followers who he knew were present and who had been embittered eight years ago by what Mr. Bryan then did to Mr. Clark in order to exalt the Mr. Wilson whom he was now in a few minutes about to turn upon. He went on from one art of oratorical persuasions to another and another. At one point he said:
>
> "I have passed the age when I seek to win your favor for myself," and left the audience to interpret that as cryptically as they might. At exactly a quarter of two in the morning he said: "If you will pardon me for holding you here a moment," and received cries of "Go on," which he well knew would come. At five minutes past two he repeated the same words and got the same response, and at a quarter past two he did it again.
>
> Finally, he had the audience waked up. Alert and in suspense he swept into his full stride, raised his voice to strongest pitch, threw the whole strength of his vitality into his manner, and denounced Mr. Wilson's refusal to compromise. The exact words of his defiance were almost lost in the vehemence of their manner and in the uproar that arose from the audience. Some person in the audience shouted, "Stand by the President," and a roar of sympathy with this sentiment rolled out across the room and swept back and forth for several minutes before the chairman could get even partial order.
>
> Throughout all this Mr. Bryan glared at his interrupter, and when he could make himself heard, said: "My friend, if you will guarantee that eight million voters will stand by the President, I will bow to their decision, but until you do that I prefer to appeal from the eight hundred here to the eight million in the country, and that appeal I am entirely ready to make if I must."
>
> The personal passion in the words and their quality of instantly belligerent response to a challenge won him some applause even from many who most heartily disapproved of what he was doing. With this encouragement he went on in a vivid reincarnation of the Bryan of his youth. He defied and almost scorned the audience.
>
> "I am talking to people," he said, "who can pay six dollars to come to a dinner like this; but the real Democratic party is not made for social occasions, and when I have decided what is right I am willing to take the responsibility for what I believe is right and appeal to the plain men and women who are not present and can not come to a place like this." Then he went on in a familiar Bryan frenzy of denunciation. He denounced monopoly, capital, the railroads, special privileges.

WHEN HE MADE "THE CROSS OF GOLD" FAMOUS.

This photograph of Mr. Bryan, taken in 1896, is considered by many his strongest and most characteristic likeness.

Having paid his respects to all the old and several new octopuses, including the well-known profiteer, the speaker went on to name the three new propositions for which he asked his party's consideration, and concluded his speech by declaring that faith in the people must be the Democratic party's policy "now and always." The sensation produced by the speech among the participants at the banquet was a sample of the interest aroused by Mr. Bryan's utterances throughout the country. There is hardly a newspaper in this broad land that has not used up several columns of valuable space in a discussion of the Bryan speech and in speculation upon what part the Commoner will play in politics during the current year. A number of them in connection with prognostications as to what he may do have given reviews of what he already has done in politics, one of the more elaborate of those that have come to our attention being one written by Edwin C. Hill and appearing in the New York *Sun*. This writer finds that Bryan's popularity has advanced and receded in four-year periods, thus: Up to 1900, down in 1904, up in 1908 and 1912, down from 1912 to 1916. It's the question as to what it will be in 1920 that is now worrying the Democrats. To quote Mr. Hill:



"WHEN THE PIE WAS OPENED—"

—Harding in the Brooklyn *Eagle*.

Already as a year of thrilling politics begins, it is obvious that something of the old fervor for him is throbbing in his distrest party, and the developing signs of regained popularity present the most amazing contrast possible to his plight less than four years ago. For then, the heyday of Mr. Wilson's party repute, few were so poor as to do the old leader honor. And I shall never forget the extraordinarily dramatic episode of a sweltering June afternoon in St. Louis when I recall that low stage of his fame.

An elderly man with a bald spot alighted somewhat ponderously from a taxi which drew up at the curb of the Jefferson Hotel, where the Democratic chiefs were buzzing on the eve of the convention which obediently renominated Woodrow Wilson. He fished some silver change from a pocket of his flapping breeches, satisfied the driver, hoisted his battered valise from the sidewalk, and paused for a moment while he cooled his moist face with a palm-leaf fan. His eyes, glinting and narrowing, studied the throng upon the sidewalk and visible, through the wide-open doors, in the lobby.

He observed J. Hamilton Lewis, then a Senator from Illinois, target for the moment of half a dozen cameras. He noted Murphy of Tammany avoiding a surge of the curious and his eyes hardened. He saw the late Senator Stone, of Missouri, and Stone's colleague, Reed, beaming upon their admirers, and within his range of vision were Judson Harmon, Walsh, of Massachusetts, and Vardaman, of Mississippi, all submitting with more or less grace to being interviewed, sketched, or snapshotted. And he stared with troubled eyes.

The correspondents avoided him. The artists, once so eager to pencil the lines of his rugged face, passed him by. Delegates were wholly uninterested in this doubtful figure. Visitors crowded around the party notables who commanded respect or furnished diversion. Mr. Bryan took in all these episodes with a long stare and then entered the hotel, elbowed to one side by the drum-major of a band which was ballyhooing a delegation just arrived. Somebody asked:

"Who is that man?"

Somebody replied: "Oh, that's Bryan." It recalled Job's plaint to Bildad the Shuhite: "They abhor me, they flee from me, the days of affliction have taken hold upon me, I am companion to owls."

This man who had been three times the candidate of the very persons who were turning their shoulders to him remained the most unregarded figure of the convention of 1916, powerless to interrupt the oratorio in honor of the new prophet. In that year enthusiasm for Bryan seemed to be decayed and dried up. Bad luck seemed to have him by the heel. Misfortune appeared to be riding him as the Old Man of the Sea rode Sinbad. He was no longer the Peerless Leader, the Great Commoner, the Hope of the Common People. He was just Dollar Bill.

The change of sentiment in that year was amazing. That Bryan could show his face in any company of Democrats without impelling bands to play, drums to beat, flags to wave, and cheers to resound seemed incredible when one recalled his power in the previous convention of his party, that unforgetable struggle at Baltimore in 1912. That he could walk through the lobby of a hotel jammed with men who had hailed him four short years before with the fanaticism of crusaders, with men who had permitted him to purge their assembly with the arrogance of a Cromwell; who had suffered him to crush the just expectations of Champ Clark, to set Woodrow Wilson upon the party pedestal, was a fact that staggered the mind.

He had come to Baltimore that year with the pomp and circumstance of a viceroy, cherishing the hope that he might magnetize the convention to select him as its candidate, but determined that Clark should never have the prize. Thousands met him at the depot and surged after him into his hotel. Wherever he walked a retinue bowed in his train. His name was the explosion of every rocketing cheer.

Bands blared wherever he showed his face, and from his modest headquarters came most of the thrills and the excitement. Upon the convention floor he raged like a maddened lion, ordering Ryan and Belmont out of the hall, humiliating Tammany, hurling defiances, and ignoring insults until by the shrewdness of his brain and the music of his voice he made Woodrow Wilson the nominee of the convention and presently President of the United States. Denied the nomination himself, he was for the time the most wonderful figure in his party.

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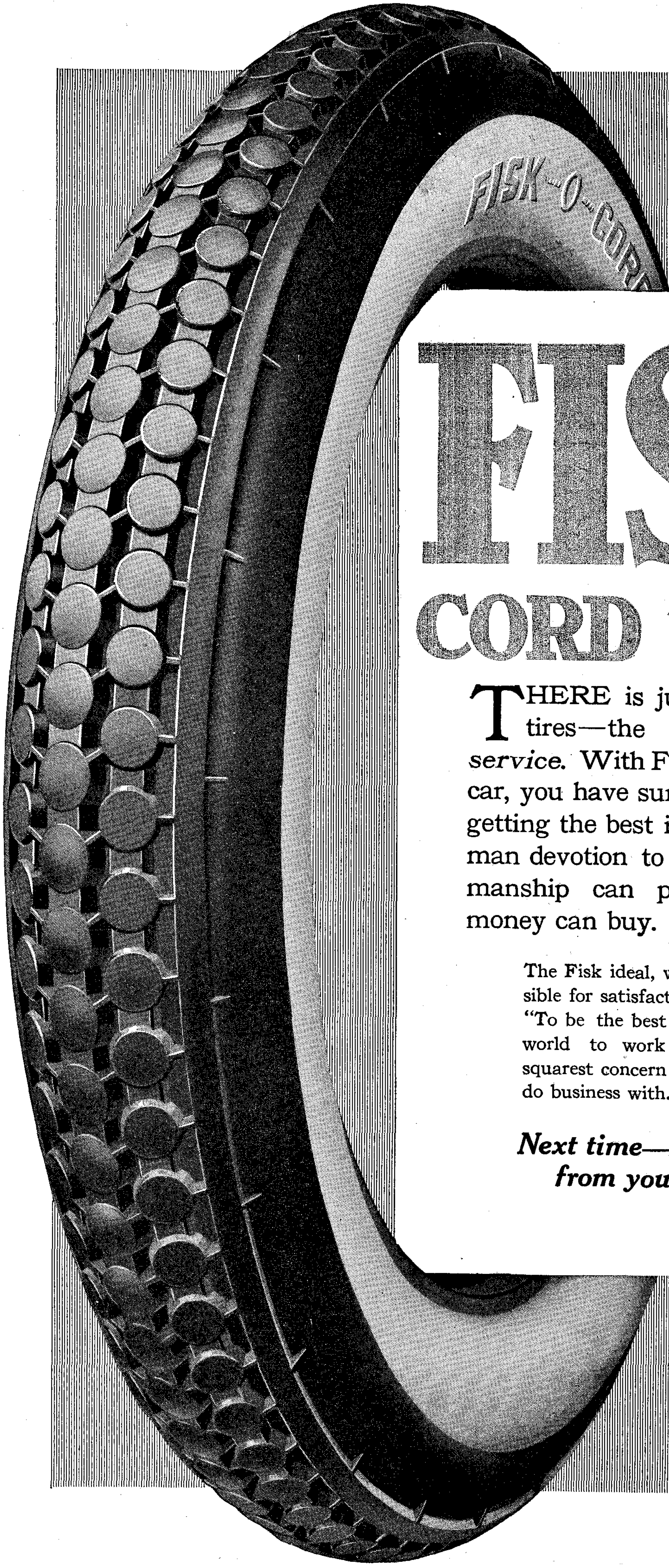
AS HE IS TO-DAY.

With oratorical powers which the newspaper correspondents found equal to those of his youth, Mr. Bryan recently stirred up the Democratic party—and the nation.



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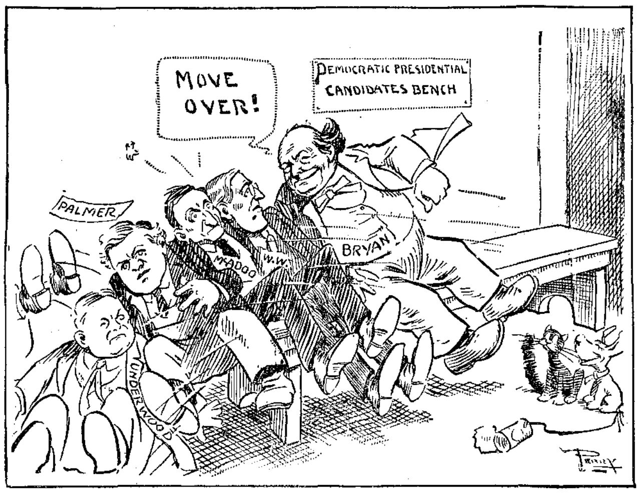
> What was true in 1912 was more certainly true in 1908, when he rode roughshod over the convention at Denver and crowned himself for the third time while a frenzied mob, shrieking his praises, marched around the hall and hurled curses at Tammany, sullen and implacable Tammany, which declined to up standards and take a step in any honor parade to the detested Nebraskan. But Tammany was small and little considered in that uproarious celebration when the delegates yelled their throats raw. It was Bryan! Bryan! Bryan! Greatest man in all the world; greatest man that ever lived. They cheered him that hectic day for an hour and twenty minutes, a record until the Bull Moose at Chicago set up another in their thrilling ovation to Theodore Roosevelt.

After what he styles a "survey of the Bryan political fever chart," the *Sun* man comes to the conclusion that the Bryan popularity is obviously "up" at the present time. It seems clear to this writer that while Mr. Bryan may not be a candidate himself, he will be a force to reckon with at the convention. He says:

> We have seen and heard in the past few weeks the movements and mutterings of reviving Bryanism. Moribund Bryan clubs are dusting off their well-worn properties and rehanging the frayed banners by the side of the cherished lithograph of the prophet. The rusty machinery of old Bryan organizations is being tuned up with much groaning and clanking.
>
> Distracted and deserted by its present leader, the Democratic party turns once more an appraising, even friendly, gaze upon the robust veteran of so many catastrophes. He is about to show himself to the faithful that they may feast their eyes upon him again. Brief time may see Bryan once more whirling up and down the nation in the vigor of the youth of his old age, improvising new conventions (as was said of Gladstone) and charming anew by his healthy, hearty personality.



THE DEMONSTRATIVE GUEST.

—Perry in the Portland *Oregonian*.

> Once again we may see and also hear delighted audiences gathering in their chosen neighborhoods to be wooed by the music of his voice before voting for his opponent. There may come again the old intoxicating shout, "Bryan! Bryan! Bryan!" the thunders of the applause and all of the strange phenomena that this man of energy, ebullience, resonance, and reverberation as the voice of tinkling cymbals assaults the octopus—any octopus that may be about at the time.
>
> What a grand time all of us would have with Bryan roaring through the land in his inimitable style of campaigning. He may never again have the chance to run for President, but he has scarcely had an equal in circus methods of pursuing the job. He always looked like a winner until the votes were counted, and he himself was invariably the most astonished person at the invariable result. It was Mr. Bryan's stumping experiences, the tremendous and enthusiastic crowds he customarily attracted, that proved more than any other demonstration in American politics has proved that crowds and enthusiasm are illusory things, poor stuff to bet on when winners are to be picked.

Mr. Hill finds an interesting feature of Mr. Bryan's reentrance to politics to be the fact that more than any other Democrat he has advocated reforms that have really come to pass. He figures out that the Nebraskan has been right at least six or seven times out of a possible twenty-two. As we read:

> As far back as 1894, when he was a Representative in Congress from Nebraska, he demanded a graduated income tax and the election of United States Senators by popular vote. A few years later he preached the virtues of an eight-hour day and a postal-savings bank. Not long after that he approached no less a person than President Taft with a plan for world-peace by an international court of arbitration.
>
> In 1914, or it may have been a year or two previously, he spoke up valiantly for woman suffrage at a time when most of his party leaders were inimical to that now triumphant cause. And even before that, in 1911, I think it was, he came out flat bang for prohibition, and sent the goose-flesh creeping up the back of the Democratic party.
>
> Bryan has been a long jump ahead of his party on a lot of things. His batting average on the whole is low, because he has been wrong on more things than he was ever right on—free silver, the President ineligible to reelection, a majority vote to override a Presidential veto, a three-fourths jury verdict in civil cases, a blind and unreasoning attack against all corporations, a referendum on war, and the popular election and limitation of terms of all Federal Judges, including the Chief Justice and Associate Justices of the Supreme Court.
>
> It might fairly be said that on moral questions he was oftener right than wrong, and on political and economic questions, matters to be broadly described as touching the practical side of life, he has been usually wrong. The point in the record seems to show that on the basis of consummated issues he has a braver, franker, and more successful lot of trophies than any other aspiring leader of the Democracy can lay claim to.
>
> This by no means excludes or excepts Woodrow Wilson, who was driven into submitting to woman suffrage, led more or less unwillingly into permitting national prohibition, and who managed, one way or another, to avoid any very earnest championship of most of the other issues linked with the name of Bryan.

Whatever rôle Bryan may play in the coming campaign, the writer sees him well prepared for it. His health is good, and tho somewhat bald and not so handsome as he once was, his voice is still superb, and he is so well off in this world's goods that any little extra expenditures connected with a run for the Presidency on his own account or in behalf of some other sterling Democrat need not worry him. Says Mr. Hill:

> He comes to this campaign in his sixtieth year and apparently in the full flower of his special abilities. The stress of hard and fruitless campaigning as well as the natural passage of years have grayed what hair there yet remains upon his massive head. The jet black locks he cast aside with impassioned gestures that time he seized the Convention of 1896 have been reaped by Time. There may not be so much fire in his eye, and certainly lines have been graved in the rocklike countenance, but he has his health, and such speaking-voice as has been given to few men.
>
> There is nothing any more soft or yielding about the Bryan of 1920 than there was about the Bryan of 1900. To the saddened Democracy he may still appear the magnetic personality formerly so pleasant to the eye and soothing to the ear. Time and experience have tempered him, doubtless; at least his friends so maintain; and certainly, as things have come about, he can not be considered the howling radical, the wild-eyed radical, that he was two decades ago.
>
> There are many in his party who have ventured under other leadership to socialistic experiments of which the Nebraskan never dreamed. As views go on his side of the fence, he might with accuracy be termed a conservative.
>
> Naturally a preacher, never more impressive than when in a pulpit and expounding a question of religion or a matter of morals, he has devoted almost entirely the past few years to Chautauqua lecturing, to appearances in the cause of prohibition and for woman suffrage, and not infrequently to straight sermonizing. In that way he has not let his celebrity grow entirely dusty and by that means he may have kept himself, tho quietly, in the public eye more definitely than one would at first suppose. A devout Presbyterian, Mr. Bryan has never ceased to combine his religion with politics.
>
> The world has been good to him in the gross, material things of life. The party could not give him the Presidency, but it has made him a rich man. There is scarcely a doubt that he is worth a million, and probably a great deal more. His *Commoner*, published at Lincoln and read by the faithful everywhere in good times and bad, has been a mine of gold, and it was estimated not so long ago that he was making one hundred thousand dollars a year from that source alone.
>
> He has a home in Lincoln with much good land about it, a farm well tilled and amply stocked. He flees from the chill of the Western prairies in winter to the soft and salubrious airs of Miami, where he has been known to chat with Colonel House, and there is another cozy retreat at Asheville. He is as well off for homes as any citizen need be.

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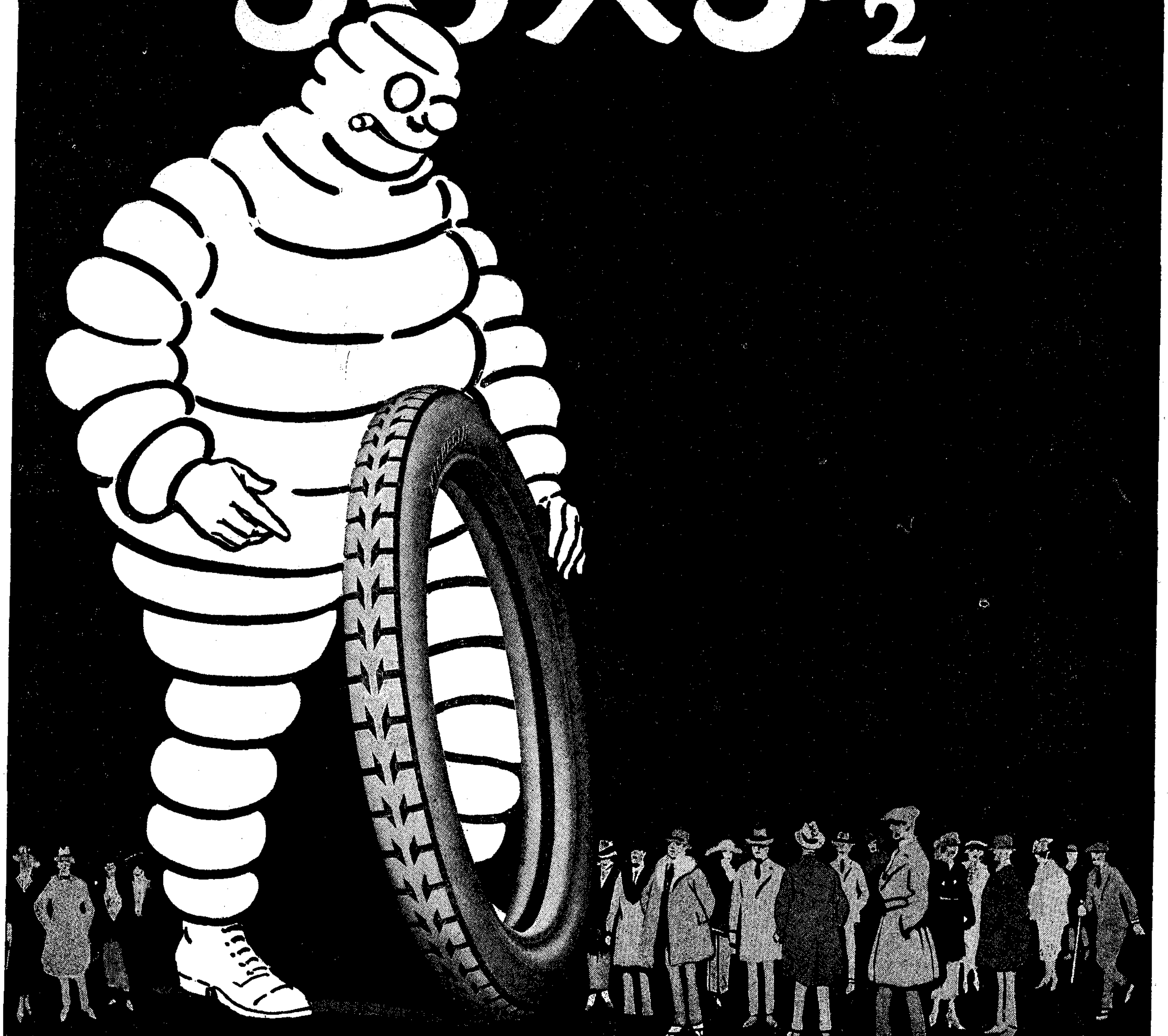

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THE RED TRAIL OF THE IRISH "INVINCIBLES"

THE RECENT REPORTED ATTEMPT on the life of Viscount French, Lord Lieutenant of Ireland, in Phœnix Park, Dublin, recalls the assassination, in the same spot, more than thirty-seven years ago, of Lord Frederick Cavendish, Chief Secretary for Ireland, and Thomas Henry Burke, Permanent Under-Secretary. In its political aspect the Ireland of that time was not much different from what it is to-day, and the radical element struggling against British rule was as active and remorseless as are its successors of the present. As the Kansas City *Star* recalls:

> The "Fenians" were the Sinn Fein of that day. The "Invincibles" comprised the radical element or the "direct actionists" of this group. The organization as a whole was opposed to Home Rule. It demanded absolute freedom from England. The "Invincibles" were for making their fight for liberty a "war to the knife," as some of their literature of that day declared. They were desperate men consecrated to a desperate cause. Their religion was the freedom of Ireland, and few there were in the band who were not ready to be martyrs to their cause. One of them placed his own neck in a noose in order to avenge his fellows for their betrayal by one of their comrades in the Phœnix Park murder.
>
> It was dusk of Saturday, May 6, 1882. Lord Cavendish had arrived in Dublin only the day before to succeed Forster—"Buckshot" Forster, the Fenians called him—who had fled from the capital for his life. Lord Cavendish had been warned of the attempts made upon his predecessor. He had been told of the oath of the "Invincibles" to "suppress" every representative of British rule. But apparently he paid little heed to his advisers, for on the fatal afternoon he was walking alone through Phœnix Park to his residence at its edge.
>
> Thomas Burke, whose own death-warrant had been signed by the "Invincible" leaders, had been one of the most insistent of those who sought to impress upon Lord Cavendish the danger under which he lived as Chief Secretary. He likewise was passing through the park the evening of May 6 in his carriage. But when he saw his chief strolling alone, he left his carriage and joined him.
>
> Few people were astir in the park at the time. Not a policeman was in sight. Only a jaunting-car, followed at a little distance by a cab, moving slowly along an adjacent path parallel to their own, gave evidence that the park was not deserted. Suddenly the car stopt and two of its five occupants alighted. They strolled leisurely across the turf separating the two paths, and then moved toward the Secretaries. One was a powerfully built man of thirty, with the torso of a Hercules. The other was a slim youth of nineteen.
>
> As Lord Cavendish and Mr. Burke drew near, the Hercules stooped as tho to tie his shoe. As they came abreast he sprang upright and threw his mighty arm about the neck of the Under-Secretary. At the same time his right hand came away from his belt and the beams of the setting sun glinted upon a shining steel blade which rose in the air, then sank into the back of Mr. Burke. The victim sank to the ground without a sound.
>
> In the meantime, however, Lord Cavendish had attempted to come to the rescue of his companion. He had only a light walking-stick for a weapon, but with this he fearlessly attempted to beat off the assailants. Naturally, his efforts were of no avail, and when the Under-Secretary was dispatched the heavier of the assassins turned upon the Secretary. The fight was soon over. The youth had been using his own knife upon the unresisting form of Mr. Burke while his partner attacked Lord Cavendish. But the odds were scarcely greater in one case than in the other, and when the last blood-red rim of the sun sank beneath the horizon two limp bodies sprawled upon the gravel path. The two assassins walked unhurriedly to their car, climbed aboard, and the car and cab set off at a gallop.
>
> Many there were who passed the two equipages that night, but in the car they saw only five roisterers, shouting and laughing as tho on a lark, and in the cab four others seemingly on a similar spree. Dusk had fallen when the two bodies were discovered, and life had long since passed from both.

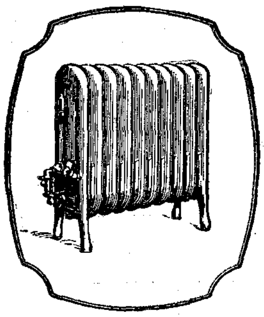
Only an excited cavalry captain who could give no coherent account of what he had seen and a lad playing in the park, who thought it was only a scuffle among rowdies, witnessed the tragedy, and the best detectives assigned to the case could unearth no clues which would lead to the identification of the murderers. Several arrests were made, but the men were released for lack of evidence. The British Government had information that the men suspected of the crime had escaped to America and to France. Those countries were asked for extradition; but both refused on the ground that the refugees were to be considered as political exiles rather than criminals. We read on:

> The months dragged by. Ireland was in a turmoil. Then came an attempt to assassinate other government officials. Pat Delaney was arrested for the assault and evidence was drawn from him on which twenty-six men were taken up by the police one night in January, 1883, and charged with the murder of Lord Cavendish and Mr. Burke. Delaney had been one of the riders in the car on the tragic night of their death.
>
> For a time the caged "Invincibles" were cool and defiant. They displayed only a contemptuous interest in the proceedings against them as they sat in the dock of the Inns Quay police-court. But there was one point in which they did show a lively interest. As they were led into the dock each man hastily counted his companions each day, apprehensive lest one of them should have turned informer and be missing.
>
> For several mornings every man turned up, and then, one morning, the count fell one short. Soon the missing comrade, Bob Farrell, was led into the room by another entrance and up to the witness-stand. A few days later another was missing from the docks—Myles Kavanagh, driver of the jaunting-car—and he added his bit of evidence against his former comrades.
>
> But still there was not sufficient evidence for conviction until James Carey, a man who had been high in the Dublin governing council of the "Invincibles" and who had played an important part in the murder, weakened and turned state's evidence. By his act he sealed his own doom as effectively as could any court conviction, for the vengeance of the "Invincibles" was as sure as fate.
>
> Carey told of the plot to kill Mr. Burke, but said the death of Lord Cavendish was due to his own courage in coming to the defense of his companion. The task was assigned, Carey said, to four men—Joe Brady, a stonecutter, whose knife it was that executed the orders of the council; Tim Kelly, a coach-builder, the youth who accompanied the Hercules; Pat Delaney and Tom Caffrey. These were the occupants of the car driven by Kavanagh. They were armed with surgeons' amputating-knives. The men in the cab, Dan Curley, Michael Fagan, Joe Hanlon, and James Fitzharris ("Skin the Goat"), were assigned to come to the relief of the assassins if they were attacked, Carey said.
>
> Carey himself was to give the signal for the attack, and had gone into the park on foot, accompanied by one Joseph Smith, the only man of the party who knew Mr. Burke by sight. Carey testified that he carried out his instructions when Smith pointed out the Under-Secretary as he descended from his carriage. He then related the incidents of the tragedy as they have been described.

On the evidence of these three informers Brady, Dan Curley, Tim Kelly, Mike Fagan, and Tom Caffrey were sentenced to be hanged. The sentence of Pat Delaney, who had succeeded Carey as informer, was commuted to penal servitude for life. Dan Delaney, a brother of Pat, was sentenced to ten years in prison, as also were James Mullet, chairman of the "Invincibles" in Dublin; McCaffrey, O'Brien, and Moloney, members of the clan. Joseph Mullett, Joe Hanlon, and Fitzharris were sentenced to penal servitude for life; but within twenty years all life sentences were revoked, and the men were set free.

> Brady was the first of the quintet sentenced to death to pay the penalty. Thousands of "Invincibles" and Fenians were gathered about the walls of the Kilmainham Jail on that May 14 and every head was bared as the flag was run up announcing the shooting of the bolt for the stanchest of the "Invincibles," the one of all those in the dock who had displayed no sign of fear or weakness, and who had attempted to seize the informer Carey by the throat as he walked to the witness-stand.
>
> Four days later Dan Curley stept to the gallows. When his peasant father, who was of the multitude outside the prison, saw the flag hoisted which meant the end of his son he fell to his knees in prayer. And all that great concourse of Irish patriots, thousands of them, followed his example, and with bowed heads awaited the lowering of the flag. Mike Fagan, Tom Caffrey, and Tim Kelly followed their comrades to the gallows in quick succession. But the blood-trail of the "Invincibles" had not yet come to an end.
>
> The Judas, Carey, denied entrance into all the British white colonies, finally was spirited out of the country on board a steamer bound for South Africa, accompanied by his family. On the same vessel was a passenger from America, booked as McDonald, whose real name is said to have been O'Donnell,

CLOW



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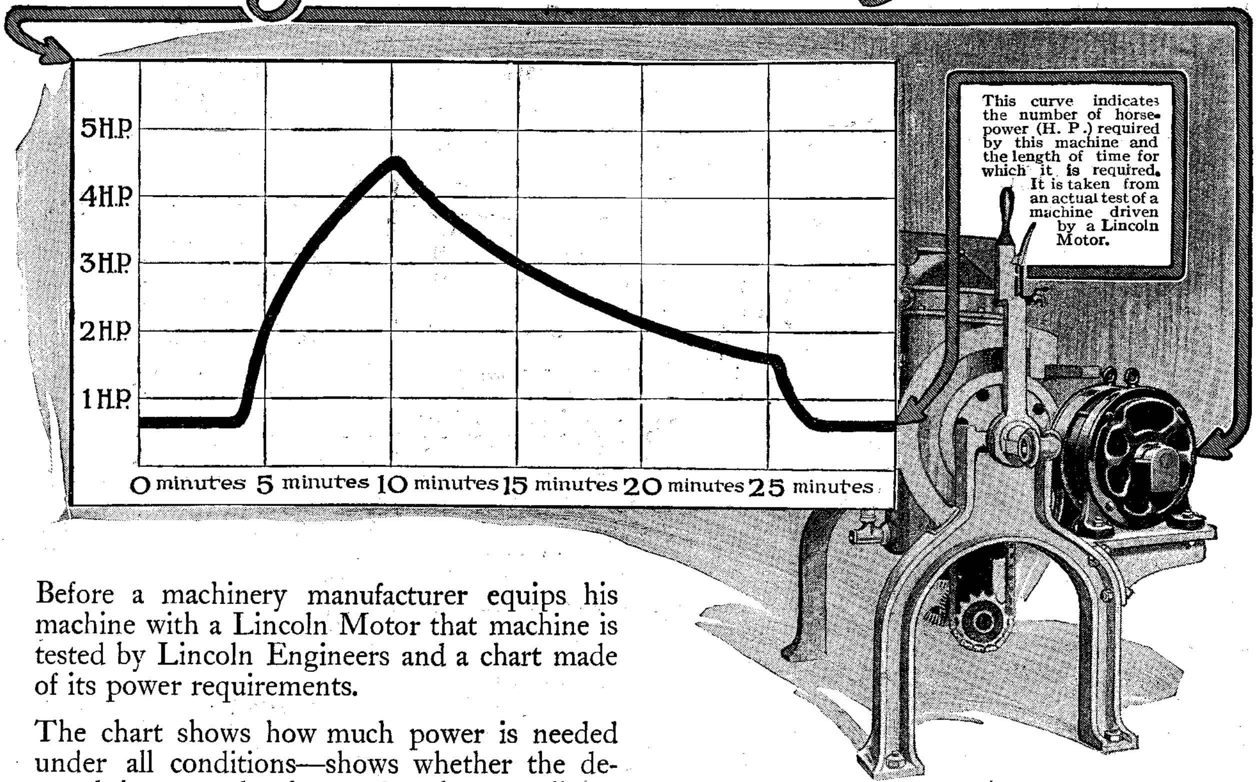
LINCOLN ELECTRIC MOTORS

Fitting Lincoln Motors By Chart



This curve indicates the number of horsepower (H. P.) required by this machine and the length of time for which it is required. It is taken from an actual test of a machine driven by a Lincoln Motor.

Before a machinery manufacturer equips his machine with a Lincoln Motor that machine is tested by Lincoln Engineers and a chart made of its power requirements.

The chart shows how much power is needed under all conditions—shows whether the demand is a steady, hour after hour pull, an occasional surge of great power for a few seconds, or a gradually increasing load.

With this data Lincoln Engineers can fit the motor to its job. Out of such charts have been developed the special types of Lincoln Motor which are standard for elevators, punches and shears, pumps and other different drives.

Whatever the machine needs there is a Lincoln Motor to fit it and a Lincoln guarantee that it will render satisfactory service.

When you buy machinery, buy the motor with the machine—and specify "a Lincoln Motor."

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Lincoln Motors are the only motors sold by the 22 branches of The Fairbanks Co. under their famous Fairbanks "OK."

Lincoln Engineers have charted the power requirements of many machines in the following classes:

Bakers' Machinery
Brick & Clay Machinery
Cranes
Crushers & Pulverizers
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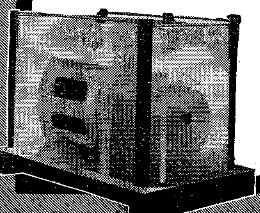
Elevators & Hoists
Fans & Blowers
Foundry Machinery
Ice Machinery
Machine Tools
Paper Machinery
Presses
Pumps & Compressors
Punches & Shears
Textile Machinery
Woodworking Machinery

This Lincoln Motor operated under water at exhibitions and conventions for over 3 years without damage to windings.



The Lincoln Electric Company

General Offices and Factory, Cleveland, O.

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Toronto-Montreal

one of the "Invincibles." He made Carey's acquaintance on the voyage, satisfied himself that he had found the man he sought, and, as Natal, their destination loomed in sight, drew his revolver, revealed himself to Carey, and shot him dead.

O'Donnell knew his own life must pay the penalty. There was no escape from the deck of the ship. But he had carried the vengeance of the "Invincibles" to the world's far places. He had given a warning to any waverers that might again appear among the inner circle. He had avenged the deaths of the Kilmainham prisoners.

THE COMPLEX PERSONALITY OF PRESIDENT WILSON

"NONE OF THE CHIEF EXECUTIVES who have guided the country during my adult lifetime has presented so baffling a problem," declares Charles H. Grasty, veteran newspaper man and friend of the President, introducing an unusually authoritative discussion of Mr. Wilson's personality in the current *Atlantic Monthly* (Boston). As utterly frank in conversation as ever Mr. Roosevelt was, and "habitually much more tolerant of frankness in others," nevertheless, says the writer, the mental processes leading to the President's actions, the extraordinarily capricious methods which he adopts in the selection of men, the remarkably definite political philosophy which marks his public acts, his practical idealism, and his lack of personal appeal of a certain sort combined to form a character that will give the political essayists of the future much to rack their brains about.

Mr. Grasty admits in the beginning that he has himself constructed a general theory of Mr. Wilson, "in which all the inconsistencies of his character fit with sufficient neatness." He adds the further admission that there may be too much of the deductive, and, too little of the inductive, in the process by which he arrived at his estimate. "But I have had opportunities of observation which furnish some warrant, at least, for making an attempt to consider this great and significant personality from every angle," he says, and thus presents his credentials:

> When, at the beginning of 1910, I acquired control of the Baltimore *Sun*, I learned from one of my associates who was then a trustee of Princeton that President Wilson might soon be leaving that institution. It at once occurred to me that here might be found that scarcest of all men, a great editor. I went to Princeton immediately and saw President Wilson. I found that I had entered the field for his services against the powerful competition of the Democratic party leaders of New Jersey. The matter was not yet settled, however, and I returned later to Princeton on the same errand. Mr. Wilson had made his choice. I recall the vivid impression he made upon me as he sat facing me in his library. All the while, in my mind's eye, I was seeing him in the White House; and when I went home that night I said, 'I have talked to-day with the man who will be the next Democratic President.' He looked the part; and of course the Governorship of New Jersey was a spring-board for the nomination.
>
> I did not get him for editor, but a conviction formed in my mind to the effect that in the college president who had led a forlorn hope at Princeton, and who was now being groomed for the New Jersey Governorship, the Democratic party would find a great leader. I came into possession at this time of some 'copy' he was writing for the State platforms in Pennsylvania and elsewhere, and was so much imprest by both the substance and the form of his declarations that I made use of them in shaping the editorial policy of my paper.
>
> *The Sun* thus became a supporter of Wilson immediately upon his entry into politics; and his original methods in New Jersey gave it much material to impart interest to the campaign of publicity which it made for him. Some one said, "*The Sun* is poisoning the coffee-cup of Maryland for Wilson every morning."
>
> In the spring of 1912 *The Sun* was largely instrumental in securing the Democratic Convention for Baltimore. Meanwhile, the paper, morning, evening, and Sunday, was sent to each Democratic delegate as he was elected, beginning as early as February. Thus the delegates came to Baltimore regular readers of the paper, and found the galleries of the convention hall filled with people who "wanted Wilson."
>
> Far be it from me to claim that *The Sun* nominated Wilson. Aside from what he himself did to accomplish the result, there were several fortunate circumstances, every one of them necessary links in the chain. *The Sun's* support was one of them; without it, a stampede to Champ Clark after he had received a majority vote could probably not have been prevented.

Mr. Grasty saw and heard from the President between 1913 and 1917. This acquaintance was the foundation upon which the writer established a relationship as a correspondent after he came to Paris, and it was mainly there, he says, that he gained the impressions which emboldened him "to appear before the readers of *The Atlantic* in an attempt to give some idea of the man as a whole." Nothing could better illustrate the processes of that judgment which have baffled commentators, we are told, than the President's trip to Paris, in defiance both of precedent and, in very large measure, of public opinion. Mr. Wilson decided, principally in consultation with himself, what he would do, and did it. From the common point of view, Mr. Grasty admits—

> Mr. Wilson has lived too much within himself. He does not submit himself to the corrective processes of association, which, not unreasonably, in view of his dilations on "Counsel," puts him in for a lot of criticism. He does not call to his side all the first-rate men who are available. Let us admit it frankly—he plays a lone hand. But having duly criticized him for playing a lone hand, one must admit that he plays it mighty well. He is no blind indulger of self. No man studies self more keenly, or is quicker to profit by experience. I am convinced that his lone-hand style of play is the result of his having worked it all out in his own sagacious mind, and with the purpose of using himself in the way best to accomplish his objects. He realizes fully how much he loses by lack of assistance and by holding aloof from consultation. But when he reckons up gains against losses in the great game that he is playing, he believes that he comes out ahead by following the bent of his own temperament. He is willing, if necessary, to do the work of ten ordinary men—he delights in work when something big is at stake—but he is unwilling, and perhaps unfitted, to scramble with his peers for a decision, on the one hand, or, on the other, to bear with the stupidity, irrelevance, and confusion of commonplace counsel.
>
> This is far from saying that he repels advice. Quite the contrary is true. No one could be more open to suggestion when it comes from those near and friendly. He is absorptive rather than impervious. But he shies away from becoming entangled. He wants to keep himself absolutely free for the decision. I fancy that he has a horror of board meetings, as many another sensible man has, with their tendency to mental impoverishment. For any but a rash executive, in need of constant restraint, the multiplicity of counsel in a board is apt to be a division of wisdom. The scheme has only a deterrent or negative virtue.

Presbyterian and Scotch as he is and never rash in impulses, the dominating thing in the character of Mr. Wilson, according to the writer, is his adventuring spirit. It is this cross in him that makes his character hard to read. He has the courage of his vision, and he goes ahead. Watching him during that daily struggle at Paris, often at close quarters, writes Mr. Grasty:

> The chief new impression that I got of Mr. Wilson was his efficiency in action. In my picture of Wilson, the wirter, orator, and scholar had been in the foreground. The experience of the past eight years has developed a high efficiency in this man who lost his fight at Princeton. After seeing him at Paris, I would expect him to succeed, if, upon his retirement from the Presidency at sixty-four years of age, he took the highly improbable step of entering the field of industry. In a large executive position, like, say, the presidency of the Steel Corporation, I confidently believe that he would make an unprecedented success. The adventure and magnitude of it might appeal to him; for in dull or small things he is helpless. He is sagacious, but lacks cunning. He must be aroused, to show his great qualities.
>
> The things for which Mr. Wilson is complained of are mainly the defects of his great qualities. If a big matter is in hand, he is so concentrated upon it that he overlooks the little matter. He has the keenest and truest sense of what is real. Irrelevance cuts him to pieces. When he is at work on a thing that engages his interest, he is like a hound on the scent. Waste of time or any kind of lost motion is like poison to him. A member of the "Big Four" once said to me: "Wilson works. The rest of us play, comparatively speaking. We Europeans can't keep up with a man who travels a straight path with such a swift stride,

> never looking to the right or left. We can not put aside our habit of rambling a bit on the way." . . . . . .
>
> The statesmen of Europe had their tongues in their cheeks when Wilson arrived; but a real friendship, mainly attributable to the latter's patience, courtesy, and humor, soon arose among them. When the President works with a small number of men at close quarters, his instinct is to establish friendly and intimate relations with them. Far from being a dogmatist, his fault perhaps lies in giving up too much in an atmosphere of comradeship. And his passion for practical results probably works in the same direction. At Paris, in seeking a common ground upon which he and his colleagues could stand, it seemed to me that he was constantly watering down the idealism which he brought to Europe with him. It was not alone his desire to come to an agreement that influenced him. He deeply wished to serve his colleagues in their respective home difficulties, by which, under their parliamentary systems, they were constantly bedeviled. . . . . . .
>
> If and when the story of the Peace Conference, and especially of the Big Four, can be told, it will throw a new light on President Wilson's personality; and many people will find that they have been hating him for lack of the very qualities in which his personality abounds.

Turning to the consideration of Mr. Wilson in his four main relationships, beginning with that of the family, Mr. Grasty credits the President with "an intense domestic instinct." A more real partnership than that which exists between him and Mrs. Wilson it would be difficult to find. As for the general home atmosphere:

> To every one within the household, including house visitors, the President is kindness itself. Once the threshold is crossed, one becomes the trusted friend. The conversation at meals and during the little rest time that follows is easy and delightful, and every one takes part freely. There is not a trace of Presidential arrogance in the President's manner. He and Mrs. Wilson live in an atmosphere of unaffected simplicity. When they were in Paris they declined all invitations when possible. Nearly every evening the scene would be the same at the Place des États Unis. The President played solitaire for huge sums of stage money, carefully keeping books on winnings and losings, from night to night. Mrs. Wilson sat by, sewing or crocheting. Sometimes she would read aloud clippings of current newspaper articles. . . . . . .
>
> The President and Mrs. Wilson are regular attendants at a modest church in the suburbs of Washington. They go there because nobody pays attention to them; whereas at the big churches they are preached at and stared at inside, and a big crowd collects outside. Neither of them has any fondness for that kind of admiration.

Of the President's suffering during the Western trip in September, which ended in his breakdown, Mr. Grasty writes:

> While he was traveling through the West, and speaking twice a day with a headache racking him, whenever he referred to it at all it was precisely as if he were speaking of any other incident of the trip. There was no pulling of a long face. At Wichita, after an extremely bad night, he was up and ready to start. Grayson was none too early in taking a firm stand. The President is a stayer and he hates a quitter. He was never a minute late on the whole trip. He is a paragon of order and punctuality.
>
> Before the headache came upon him, he was very fond of going through the train and visiting the newspaper men. He made us all feel that he was of our tribe.

Taking up the President's relations with his Cabinet and other high government officials, Mr. Grasty discovers patience, geniality, kindness, and extraordinary loyalty, and also a certain reserve. Wilson resembles Washington in this respect, says the writer: no one slaps him on the back. There has been more criticism over his putting commonplace men into office and then sticking to them than over almost anything else in his Administration. The writer gives his theory, admitting that it is no more than a theory:

> In what he can do well, and likes to do, Mr. Wilson is tireless: but he is very indolent about what he is not proficient in. He is not a judge of men; he has not the *flair* for it, and it is something that is not a matter of analysis. The selection of men is a labor to the President, and is a thing that has been largely attended to by others for him. Once the business is fixt, he is not going to unfix it. And afterward there comes in that element of domestication to which I have referred. When the President sits around the table with men, and comradeship sets up, the harder the critics pound him and them, the more immovable he becomes. They may be poor things, but they are his own. I have never known a man who could put criticism on one side as serenely as Mr. Wilson can. He is implacable. "They say. What say they? Let them say." . . . . . .
>
> Here again he resembles his paternal prototypes, for the Presbyterian preacher must have quiet in the house at the sermon-making time. Mr. Wilson carried his method through the whole war. When General Pershing was appointed head of the A. E. F. he was there to stay, and knew it. The President would never have listened to any tattle. In every crisis he backed his man with granite fixity. No general in Europe was in Pershing's strong position. Without this rock to stand on, Pershing could not have maintained himself against the storm of European opposition aroused by several of his big decisions.

It is admitted by the President's interpreter that those who believe most thoroughly in Mr. Wilson have been puzzled by his "seeming lack of magnanimity," particularly in the cases of General Leonard Wood and Theodore Roosevelt. "In the baffling complex of this peculiar man" Mr. Grasty discovers other explanations. The "shabby treatment" accorded General Wood may have been grounded in the "needs and exigencies of the war," while that final detail, the offer of an obscure post in the South or Hawaii is hypothetically credited to Secretary Baker. As for the case of Colonel Roosevelt:

> If the President had been an emotional man, he would have met Roosevelt with hands outstretched. But to my mind, his failure to respond is explainable on grounds other than lack of magnanimity. Personally I was a warm and sincere admirer of Mr. Roosevelt, and I believe that he rendered a very great service to his country both in office and out. But there were thousands of people who did not admire him, and the President was one of these. When the Colonel presented himself, the President put him and his possible value through a coldly intellectual process of assessment, and his conclusions were in accordance with his judgment of what would best promote the interests of the country in the war. Again he failed in the importance of the gesture.

The same lack of what Mr. Grasty calls "the grand-stand instinct" is seen as one of the basic facts of Mr. Wilson's character. "He steers by intellect, and does not possess the emotional qualities to correct his reckoning." On his Western tour, for instance:

> He could not be persuaded to make oratorical use, except with the most severe restraint, of the deeds of valor of the Army and Navy, of which he was Commander-in-Chief. Thousands of women and men whose dead sleep in France sat in front of him with hearts begging for allusion in terms of sentiment and pathos. He left them unsatisfied, contenting himself with powerful appeals to reason. He may himself be conscious of his emotional limitations. Or he may have felt a sense of impropriety in making a sort of political commerce of the memory of our noble dead; for he is a man of high dignity.

Then we have a striking consideration of the President as a man with the great gift of appealing to mankind in the mass. This same Woodrow Wilson—

> The President who shuts his eyes, stretches out his hand, and touches the man nearest, who shall thereupon be a Cabinet Minister; who stumbles in his dealings with Congress, and who is generally helpless in the grind of office, rises to a great height as a statesman. His near sight is defective, but when he looks up and out, no man sees further or more clearly. He lacks the "spirit of the herd," but no other man in public life is more in touch with the spirit of mankind. He frankly "plays to mankind." His enemies admit that he is the best judge of what they call "mob-psychology."
>
> Such broad sympathies are uncommon in a man of orderly mind and of fundamentally conservative instincts, and in the inevitable conflict of classes which impends in the world, Mr. Wilson is in a position to do humanity an inestimable service as interpreter and mediator between the warring elements. He has perspective, he is always looking far ahead. He can not see the trees for the woods. The little things by the way do not distract him, for they escape his attention. If his life and health are spared, a man of such vision in combination with such extraordinary practical qualities will go far, whether as President or as an unofficial leader. Happen what may, the fact stands that largely through his effort—which has been more than effort: it has been a striving, even an agonizing, to use the

When Quality Counts

There is a striking similarity between roofing and friendship. A roof can be like a fair-weather friend—dependable only under favorable circumstances. Or it can be like a friend in need—coming up to scratch when the most is asked of it. That's when friendship counts in a man. It's when quality counts in a roofing.

Remember that Ru-ber-oid is a ready roofing that gives most when the most is asked of it. Its quality shows best, not in the store, where you buy it, but when it is out on a roof—where wind and sleet and snow test the true worth of a roofing.

On many a roof Ru-ber-oid has proven "a friend in need" for over twenty years. It has stood the test of time and service. And that after all is the only test which will tell anything about durability.

Yes, Ru-ber-oid does cost more than many other ready roofings. It is made to meet a standard of quality, not a standard of price. It is worth every cent you pay for it and that's the important point to you—if you want a high quality roofing.

You'll find it worth while to read a booklet, "Roofing Facts Worth Knowing." A copy will be sent you on request.

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There is but one Ru-ber-oid. The Standard Paint Company makes it.

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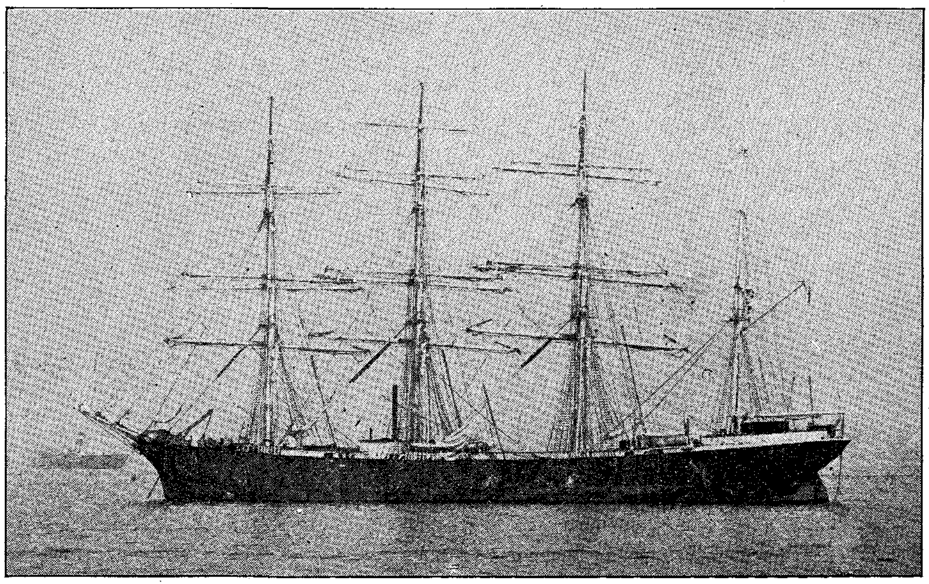
Giant Brand
Hercules Brand
Ru-ber-oid Asphalt Saturated Felt
Ru-ber-oid Waterproofing Felt
Ru-ber-oid Waterproof Cloth

real equivalent of the Greek word of which the St. James version gives the milder rendering—the world has been faced toward peace and it will not turn back. Historically he will be a member of the group of three great Presidents—Washington the Father, Lincoln the Emancipator, Wilson the Pacificator.

THE "ANDRINA," A GALLANT SHIP THAT REFUSED TO STAY SUNK

SAILING THE SEAS TO-DAY UNDER CANVAS, with four masts so lofty that she could not pass under Brooklyn Bridge during her recent voyage to New York City, is a ship which many an ancient mariner, meeting her again on the seas, may well take for a ship's ghost. Even tho the big sailer is anything but a ghost, it is true that she has but lately returned from a grave at sea. For more than twenty years she lay upon a Patagonian reef, given up both by her owners and the underwriters as a total loss, her great hull and wrecked spars left to be a plaything for the winds, waves, and drifting ice. But her builders builded better than they knew: She was made of stanch stuff, put together with old-time sincerity as well as good material, by the English ship-building firm of Mordaunt & Co., in Southampton, England. Two decades of battering on the reef damaged her so little that, when she was dragged off again, she was able to make a voyage of ninety-two days, nine thousand miles, from the most southerly port on the globe, to New York Harbor. There she discharged a wool cargo of some seven thousand bales valued at $1,500,000, gathered from the far-away ranches of Patagonia. This formidable task completed, she went into a dry dock in a Brooklyn yard for her first real overhauling since those long-past days before she met disaster on the southern extremity of the hemisphere. "The rejuvenated ship is as sound as the day she was launched and good for many a long voyage after her rest of twenty years on the reef," says *The Rudder* (New York), and the New York *Evening Sun*, thus briefly sketches her adventurous career:



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BACK ON THE HIGHWAYS OF THE SEA.

The white outlines of the spars may be due to snow, but they suggest the ghostly character that the old *Andrina* must have had, in the eyes of old-time shipping men, when she arrived in New York Harbor after lying twenty years on a Patagonian reef.

> The urgent need of oceangoing ship tonnage is illustrated in the story of the *Andrina*, renamed the *Alejandrina*. For twenty years the *Andrina* lay on a reef in the Straits of Magellan, where she had been beached in a terrible storm. In seven feet of water and mud one part of her lay, while another section of her hull, untouched by water, was embedded in two feet of sand and mud.
>
> Built by Mordaunt & Co., in Southampton, England, the *Andrina* was a stanch four-masted sailing-ship of beautifully curved outlines, but regarded as a total loss by her underwriters and her British owner. Unprotected during all the years, she was exposed to the ravages of wind and storm and shifting tides.
>
> With the ever-increasing and more urgent demand for cargo ship tonnage caused by the world-war, Menendez & Co., called the wool kings of Patagonia, were hard prest to find transportation for their product, and because of their need decided to attempt the salvage of the ship that lay on the reef near Punta Arenas.
>
> For four months, working in ten-day periods when the tide and the light of a new moon favored, two nine-hundred-ton steamers tugged and hauled until her hulk was floated, and then she was towed to Punta Arenas to be fitted for the journey so recently ended at Brooklyn.
>
> Because of her tall masts she could not pass under Brooklyn Bridge for cargo discharge, but berthed outside, after which she was drydocked at the Morse yards for a thorough inspection for the first time since she had been tossed on the reefs twenty years before.
>
> Her hull was found to be in a remarkable state of preservation, notwithstanding her long exposure to the elements. Before leaving Punta Arenas she had been passed upon by a deep-sea diver only, and upon his opinion as to her seaworthiness the *Alejandrina*, laden with cargo, started on her long journey to New York with a Norwegian skipper, German officers, and a Chilean crew. The question arises, in view of the great need for cargo-carrying vessels, whether or not the sailing-ship with its small crew, no heavy fuel cost, and its other economical features may not become a most profitable substitute for the higher-cost steamships in cases where speed is not a necessary consideration.

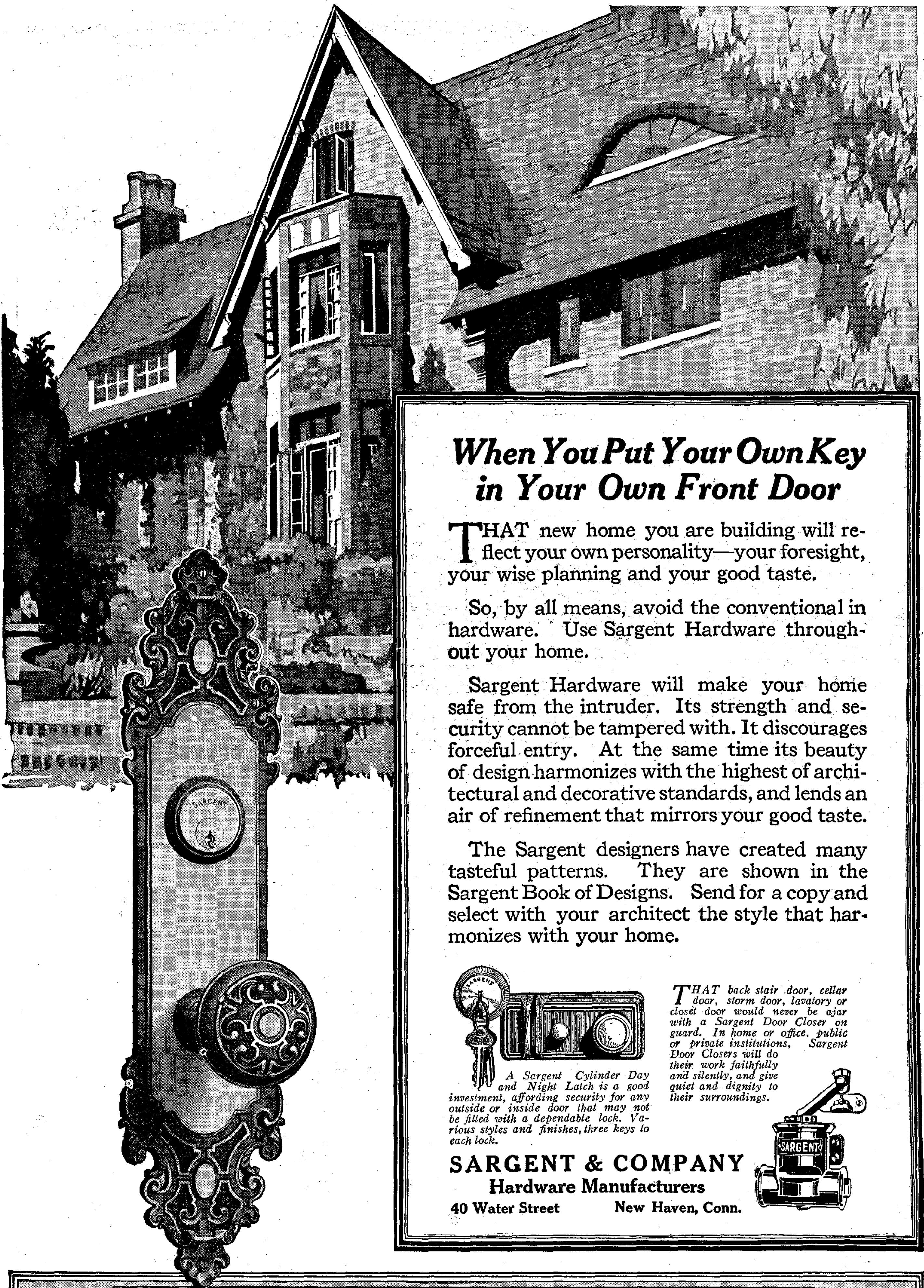
MORE ABOUT THE "REPUBLIC OF JONES"

THAT OBSCURE "REPUBLIC OF JONES" which bobbed up during the Civil War, and whose brief story was told in these columns not long since, had, it appears, an even more checkered history than the investigator of the New York *Sun*, from which we quoted, stands sponsor for. Newt Knight, who still resides a few miles from Laurel, Miss., we are told by the Laurel *Daily Leader*, was responsible for the formation, or at least for the reported formation, of this republic in 1864. *The Leader*, while it does not quote Mr. Knight, states that "it is not believed that Knight's company ever embraced more than a hundred men, and a great many of these came from a neighboring county. They refused to participate in the war on the side of the Confederacy, but were never connected with the Union Army. Locally they were known as 'deserters,' and it is said that they had a rendezvous in Leaf River swamp, where they defied all comers." This romantic band, we are told, "represented a small minority of the county's population," and "is responsible for the impression which prevails in some circles that Jones County actually seceded from the Confederacy at some period during the Civil War. However, there is no official record of such action, and citizens who reside in the community declare that it had no foundation in fact." The whole matter of this small rebellion within a rebellion was repudiated by the action of the Confederate soldiers, says *The Leader*,

> Who, after their return from the war in 1865, succeeded in inducing the State legislature to change the name of the county, from Jones to Davis, contending that the name of Jones, because of the conduct of Knight and his followers, had "become a badge of ignominy and a term of reproach."

The same *Leader* editorial takes exception to the assertion of the correspondent of the New York *Sun* that Jones County is "somewhat secluded and sparsely populated." To quote this local authority:

> Jones County is no longer secluded. On the contrary, it is



When You Put Your Own Key in Your Own Front Door

THAT new home you are building will reflect your own personality—your foresight, your wise planning and your good taste.

So, by all means, avoid the conventional in hardware. Use Sargent Hardware throughout your home.

Sargent Hardware will make your home safe from the intruder. Its strength and security cannot be tampered with. It discourages forceful entry. At the same time its beauty of design harmonizes with the highest of architectural and decorative standards, and lends an air of refinement that mirrors your good taste.

The Sargent designers have created many tasteful patterns. They are shown in the Sargent Book of Designs. Send for a copy and select with your architect the style that harmonizes with your home.

A Sargent Cylinder Day and Night Latch is a good investment, affording security for any outside or inside door that may not be fitted with a dependable lock. Various styles and finishes, three keys to each lock.

THAT back stair door, cellar door, storm door, lavatory or closet door would never be ajar with a Sargent Door Closer on guard. In home or office, public or private institutions, Sargent Door Closers will do their work faithfully and silently, and give quiet and dignity to their surroundings.

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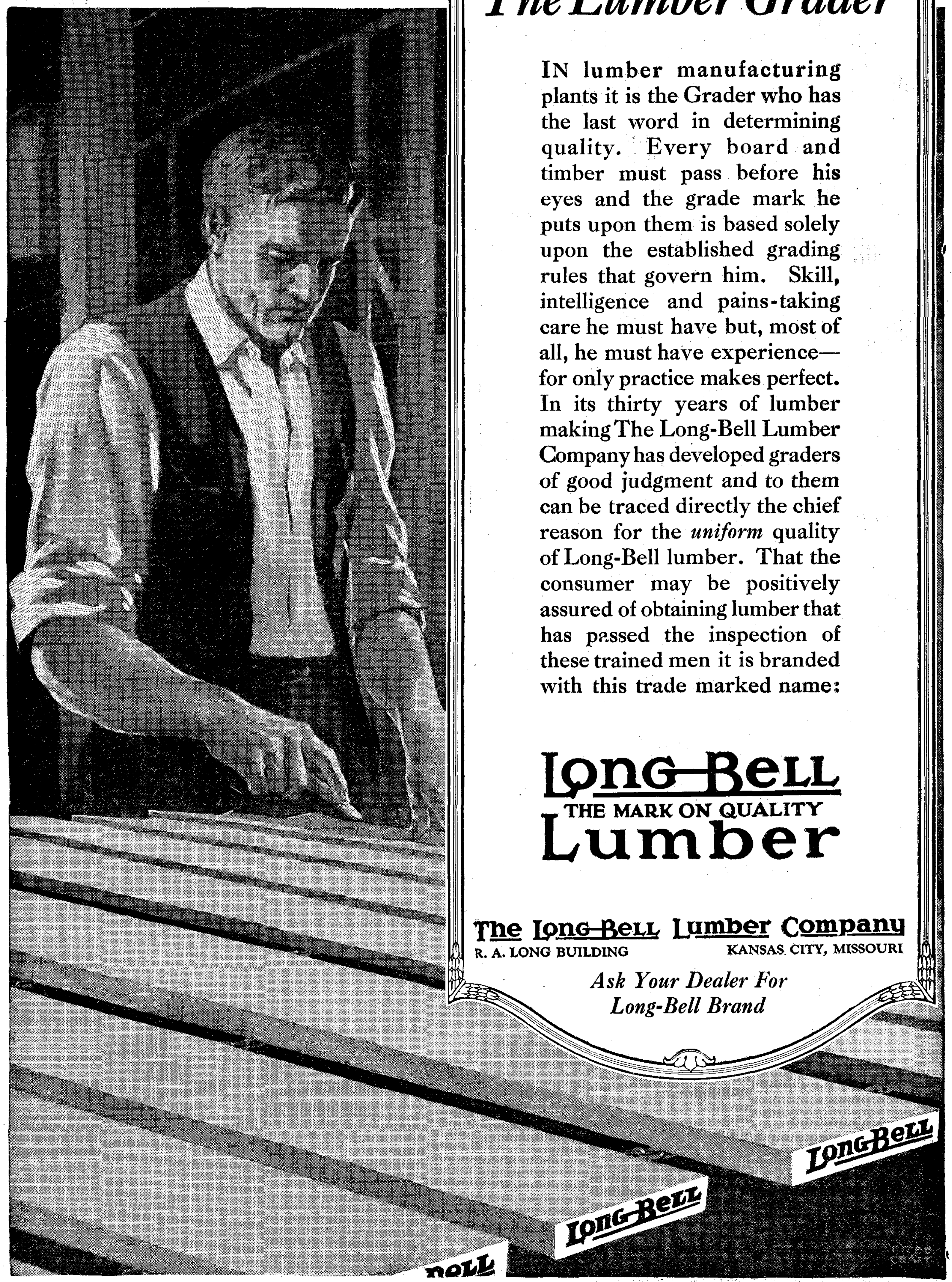
Southern Pine Lumber and Timbers, Oak, Oak Flooring, Gum; California White Pine Lumber, California White Pine Doors and Sash, Screen Doors, 3-ply Veneers, Creosoted Lumber and Timbers, Posts, Poles, Ties, Piling and Wood Blocks.



The Lumber Grader

IN lumber manufacturing plants it is the Grader who has the last word in determining quality. Every board and timber must pass before his eyes and the grade mark he puts upon them is based solely upon the established grading rules that govern him. Skill, intelligence and pains-taking care he must have but, most of all, he must have experience—for only practice makes perfect. In its thirty years of lumber making The Long-Bell Lumber Company has developed graders of good judgment and to them can be traced directly the chief reason for the *uniform* quality of Long-Bell lumber. That the consumer may be positively assured of obtaining lumber that has passed the inspection of these trained men it is branded with this trade marked name:

LONG-BELL
THE MARK ON QUALITY
Lumber

The Long-Bell Lumber Company
R. A. LONG BUILDING KANSAS CITY, MISSOURI

Ask Your Dealer For
Long-Bell Brand

traversed by three railroads, and the city of Laurel is just as accessible as Vicksburg, Jackson, or Meridian. According to figures contained in *The World Almanac*, Jones County polls more votes than any other county in the State except Lauderdale, and the city of Laurel has more capital invested in manufacturing than any other Mississippi municipality.

And Jones County is not "sparsely populated." The population of the county is estimated at more than forty thousand, and the city of Laurel will probably show a population of above fifteen thousand in the census to be taken this year. The assessed valuation of Jones County property is about ten million dollars, and its actual value probably twice as much. An interurban electric railway connects Laurel and Ellisville, the two county-seats, and more than a half million dollars has been expended on roads within the past two or three years. In the city of Laurel we have factories employing more than three thousand men, electric cars, many miles of wood-block and asphalt streets, and practically every convenience to be found in any modern city.

Mr. John A. Lusk, of Guntersville, Alabama, calls our attention to the fact that the small rebellion in Jones County was not the only incident of this character which happened in the South during the Civil War. As he writes, under date of January 7:

By a search of the records you will find that Winston County, Alabama, a section of the State at that time entirely remote from railway or water transportation and almost a wilderness, being sparsely settled, seceded from the State of Alabama and declared its independence, and organized a form of government and issued currency.

THE CHINESE COOLIE THINKS OUR MANNERS VILLAINOUS

THE CASUAL TRAVELER IN CHINA who goes home and writes a book, handsomely bound and illustrated with snap-shots of temples, tea-shops, and such, seldom is in possession of the "right dope" as to the attitude of the natives, we are told by a writer who has recently made an investigation of the subject. The complexity of the ways of the Chinese, it seems, makes it impossible to form just or accurate concepts of their social life, public and private morals and class distinctions without a more thorough knowledge than may be obtained from superficial observation. In his article, which is entitled, "What the Chinese Coolie Thinks of the European," and is published in *The Far-Eastern Review* (Tokyo), this writer, among other things, furnishes the information that, in spite of all occidental notions to the contrary, China is not a land of sharply defined class-distinctions. The so-called coolie, we learn, is not a hopeless outcast, nor is he considered of lower intelligence than the governing classes. He may not be able to read and write, but he is familiar with the Confucian classics and is well versed in the laws of etiquette and courtesy. It appears, further, that his opinion of the man from the West is far from flattering to the latter, the coolie's main idea apparently being that the European is a barbarian with villainous manners, to be tolerated only because he is powerful and rich. As *The Review* puts the matter:

Westerners are almost universally convinced that China is a land of classes and castes and of closely drawn social distinctions; yet nothing could be more untrue or unjust. As a matter of fact, the word "coolie" is not Chinese, and, outside the narrow coast-belt of foreign influence, there is no Chinese word which describes such a class. The poor are "those who eat bitterness," or "those deserving pity"; laborers are described as laborers and have their dignity; farmers rank high in the social scale, and beggars have their individual merits. But no term serves to describe what the European calls the "coolie class," and in Chinese thought it is non-existent. For in China no hereditary class survived the wreck of the feudal system in the third century B.C., but the members of the Imperial family and the descendants of Confucius.

There is no country in which wealth is so much sought after and so carefully handled as in China, and yet none in which money plays so small a part in determining a man's social status. There is no country, again, in which ancestors are so much reverenced as in China, and yet none in which man's forefathers and their achievements have so little influence upon popular esteem. In each generation the individual is judged on his merits, and, apart from moral excellence, merit in China means scholarship.

The highest title in the land is no higher than that of "teacher." The son of the barrow-coolie who makes himself a master of Chinese erudition may converse on equal terms with ministers of state and dine with the lordly, tho his gown is faded and greasy and his poverty forces him to tell stories for a livelihood.

Since the Chinese recognize in every man the right to the fruit of his labor and intelligence, they also recognize in every man the potentiality of great things, and, however low a man is in his fortune, he is still a man and is entitled to consideration and courtesy. Many a great statesman in China has a more intimate and sympathetic knowledge of his cartman's life and affairs than the butler of a European household has of the coachman's life and aspirations. The Chinese carter knows that the statesman is a scholar who holds a high office because he has earned it, so he treats him with the respect which his attainments deserve; but the statesman-scholar never forgets that the carter is a man and is entitled to human consideration.

The foreign visitor to Chinese official establishments will be amazed to hear the "Great Man" discussing politics with his servants, and perhaps carrying on a waggish conversation with the European's own humble retainer. He marvels at the freedom with which his servant responds to the advances of the august person, and the grace and courtesy which he displays in his speech and actions.

Sometimes the European will wonder why these social graces, displayed so lavishly by his servant on such occasions, have been conspicuous by their absence in the latter's relations with his European employer. The explanation is, in effect, that the Chinaman feels such display would be wasted on the Westerner, and he is apparently averse to "casting his pearls before swine." It is different when it comes to intercourse with his own people, however. His courteous manner then is in evidence, we are told, whether his dealings are with a representative of the higher classes or with one of the lowest. As we read:

The foreigner goes abroad and buys a load of bricks. When the bricks come he may observe from some hiding-place how the lowly one who scrubs his floors and the grimy one who carries in the bricks address each other as "venerable" persons, ask politely all manner of solicitous questions, settle down to a formal cup of tea, if both have time, and bow at parting, murmuring pleasantries the while.

It is scarcely an exaggeration to say that there is more formality shown at a formal meeting of jinrikisha coolies than in a council of European ambassadors. Every coolie, whether or not he can read and write, knows the traditions of right conduct and the benevolent and democratic injunctions of the Confucian classics. The poorest laborer from the meanest household knows all the laws of etiquette, knows how he should address every member of society, and the precise form of courtesy with which he should be treated by every man, from the governor of his province down to his fellow laborers. He knows how to conduct himself in any gathering in which he may find himself, and is as much at ease with his intellectual superiors as with his equals or inferiors. He is seldom embarrassed, seldom awkward, and never boorish in his relations with Chinese.

The foreigner who has learned a little Chinese addresses his dignified *majordomo* as "you," without any polite modifications of the raw pronoun, and the Chinese addresses the foreigner as "you," because he thinks him too much a boor to understand a more polite expression, tho he would probably start a conversation with the cook with "you, my elder brother," or "you the venerable one." These petty courtesies, with which the average Westerner will not be bothered, even when he knows them, are essentials of Chinese intercourse, and the man who ignores them commands no more respect than if he were to run about naked and paint his skin.

The writer then discusses the perturbation of the Chinese when he comes in contact with the European. The latter is incomprehensible to him. The Westerner goes blithely on his way, committing horrible breaches of etiquette and otherwise deporting himself in a manner that awakens the Celestial's resentment and contempt. Further:

It is not very flattering, but it is certainly true that whatever respect is shown a foreigner in the Orient is a tribute to his generosity or his heavy hand, until he has acquired such an intimate knowledge of the Chinese language and the Chinese mind that he is no longer a foreigner. The coolie has much less respect for the "man from the ocean" than the mandarin has because he has less appreciation of foreign achievements and foreign culture. He judges us by our appearances and our conduct, and in the light of Chinese tradition and Chinese standards we are ignorant, brutal barbarians, inflicted for some strange reason upon the land.

In the treaty ports, especially in Shanghai, where generations of Chinese have come in contact with generations of men from across the sea, there are better understanding and more appreciation of the outsider's merits apart from his bad manners. These same bad manners have even proved contagious, and the countryman who comes to Shanghai is horrified to hear seeming gentlemen address each other with all the crudeness of foreign savages. But the traveler in communities which have not come under European influence may have the doubtful satisfaction of knowing that unless he conform to the traditions of the land, the miserable persons whom he lightly classes as coolies consider themselves, and are considered by all, his social superiors. The coolie is a "man of Han," who may become a prime minister, but the foreigner is a barbarian and for him there is no hope—he is beyond the pale.

JUSTICE FOR THE POOR AS SOME NEW YORK JUSTICES SEE IT.

"WE CHALLENGE THE ACCURACY of the statement that there is an 'existing denial of justice to the poor' in the courts of the city of New York." Thus ten justices of the New York Municipal Courts indignantly reply to a widely quoted phrase in the bulletin, "Justice and the Poor," published by the Carnegie Foundation. The justices quote from the report the following generalizations: "The administration of American justice is not impartial; the rich and poor do not stand on an equality before the law; the traditional method of providing justice has operated to close the door of the courts to the poor, and has caused a gross denial of justice in all parts of the country to millions of persons."

To this summary they demur.

> Was it necessary for the author of the report to indulge in such wild statements to induce the Carnegie Foundation to favor a grant of funds to legal-aid societies? The words quoted except no court and no part of the country from the terrible indictment. So far as New York and the Municipal Court are concerned, the charge is untrue. His conclusions are refuted by statements contained in the report dealing with present-day conditions, tho frequently they are slurred over in contrast with narration of sensational episodes and quotations of the dim and distant past.

The book containing the phrases that give such offense to the magistrates was prepared by Reginald Heber Smith, of the Boston bar, and was the subject of wide-spread comment.

Emphatically pleading not guilty to the indictment, so far as it relates to the courts over which they preside, the ten justices point out that no one of the three defects to which the so-called existing "denial of justice to the poor" is attributable exists in their courts. These three alleged defects are (1) Delay; (2) High court costs and fees; (3) Expense of counsel. In their answer the justices say:

> 1. Delay. There is no delay. A summons is returnable within five days from the date of its issuance. It is almost the invariable practise to dispose of small cases such as wage-cases, work, labor, and service cases, etc., without adjournment on the day on which the cases are placed on the calendar, which is within five and not more than eight days after the defendant has appeared, if the case is contested. If it is not contested there is no delay whatever in the entry of judgment after the defendant is in default for failure to answer after the five days have expired. Judgment is automatically entered by the clerk upon the plaintiff's filling out a blank form of complaint and swearing to it before the clerk.

In regard to cases involving sums of less than $50 it rarely happens that these are not disposed of in, at the most, two hours after they have been called in the calendar. It is common that cases are tried within two weeks of the beginning of the action. As to the second item, we read:

> 2. Court Costs and Fees. The court costs in the Municipal Court are extremely small. The total court fees can not exceed $2, and in a case where the defendant interposes no defense and files no answer the only fee is $1. In an action brought to recover wages by an employee against his employer even that small fee is not required to be paid if the claim is for less than $50. Where a party is too poor to pay the court fees the clerk will prepare and take for the party his affidavit in which he asks leave to sue or defend as a poor person. These applications are invariably granted. Where a party is permitted to sue or defend as a poor person he pays absolutely no fees or costs of any kind.

Rebutting the third specification in the indictment, the justices affirm:

> 3. Expense of Counsel. It is entirely practicable for a party to conduct his case in the Municipal Court without an attorney. It happens daily in almost every one of the parts of the Municipal Court that both plaintiffs and defendants are in court presenting their claims without attorneys. Their rights are protected adequately by the judges of the court, who listen to the stories of the parties and their witnesses, if any, and examine the witnesses, bringing out all the important facts.

A poor litigant can obtain and serve a summons without legal aid, and can obtain legal aid, where necessary, without cost. Further, the justices point out—

> As an illustration of the care which the judges exercise in passing upon the claims of parties who are not represented by attorneys, it is a matter of frequent occurrence where one party is represented by an attorney and the other not for the attorney to withdraw and intrust his client's cause to the court, realizing that the rights of the parties will be fairly adjudicated by the court without regard to their wealth or poverty.
>
> As a further protection to the poor litigant, where a wage-earner secures a judgment under $100 for wages, he is entitled to enforce his judgment by causing the arrest, if necessary, of the defendant. This remedy is a most effective one to enforce a claim against the collection of the judgment, and is one of the very few instances in our law which still survives where a party may be arrested for debt.

In an article in the New York *Times*, Henry W. Taft, the distinguished legal authority and brother of the ex-President, points out that Mr. Smith's report is by no means the sweeping indictment of the courts that many seem to have inferred, admitting, however, that the author "is not free from some blame for this, for his generalizations have been frequently made for rhetorical effect and his special instances have sometimes been injudiciously selected."

Mr. Taft also quotes a letter from William McAdoo, chief city magistrate of New York, saying:

> This report has been used for purposes far from the intention of its author. Radical publications and speakers have given it a wide circulation. They emphasize their point of view that there is no justice for the poor in New York City. It is too bad that such an erroneous and false impression should have found lodgment in the public mind.

Mr. Taft shows that the report, as a whole, is really valuable and constructive, reviewing conditions in the minor tribunals and indicating that in the last quarter century there has been a most encouraging progress toward equality in justice. He points out that the report describes the fundamental principles of our jurisprudence as being "democratic to the core" conferring rights and imposing liabilities "without respect to persons"; and that it says that tho the system of administration is not free from "grave defects," yet it deserves "to be recognized as a remarkably satisfactory human achievement."

The discussion has served to provoke newspaper comment, whether in praise or otherwise, of local courts. Thus we find the Louisville *Post*, in an editorial upon the report of the New York justices, observing:

> If the facts are as given, and we see no reason to doubt them, we think the Municipal Justices in New York have successfully defended themselves and the court in which they sit. But it is otherwise in many parts of the country. Few people will deny that the Kentucky system, which leaves to city and county magistrates the jurisdiction in most cases involving the property rights of the poor, is very bad indeed. Not that we mean to indict all of the magistrates; some of them are satisfactory, while others are fair, and still others are unsatisfactory. But the system is bad. The magistrates receive their remuneration in "fees"; the constable and other court officials depend on the

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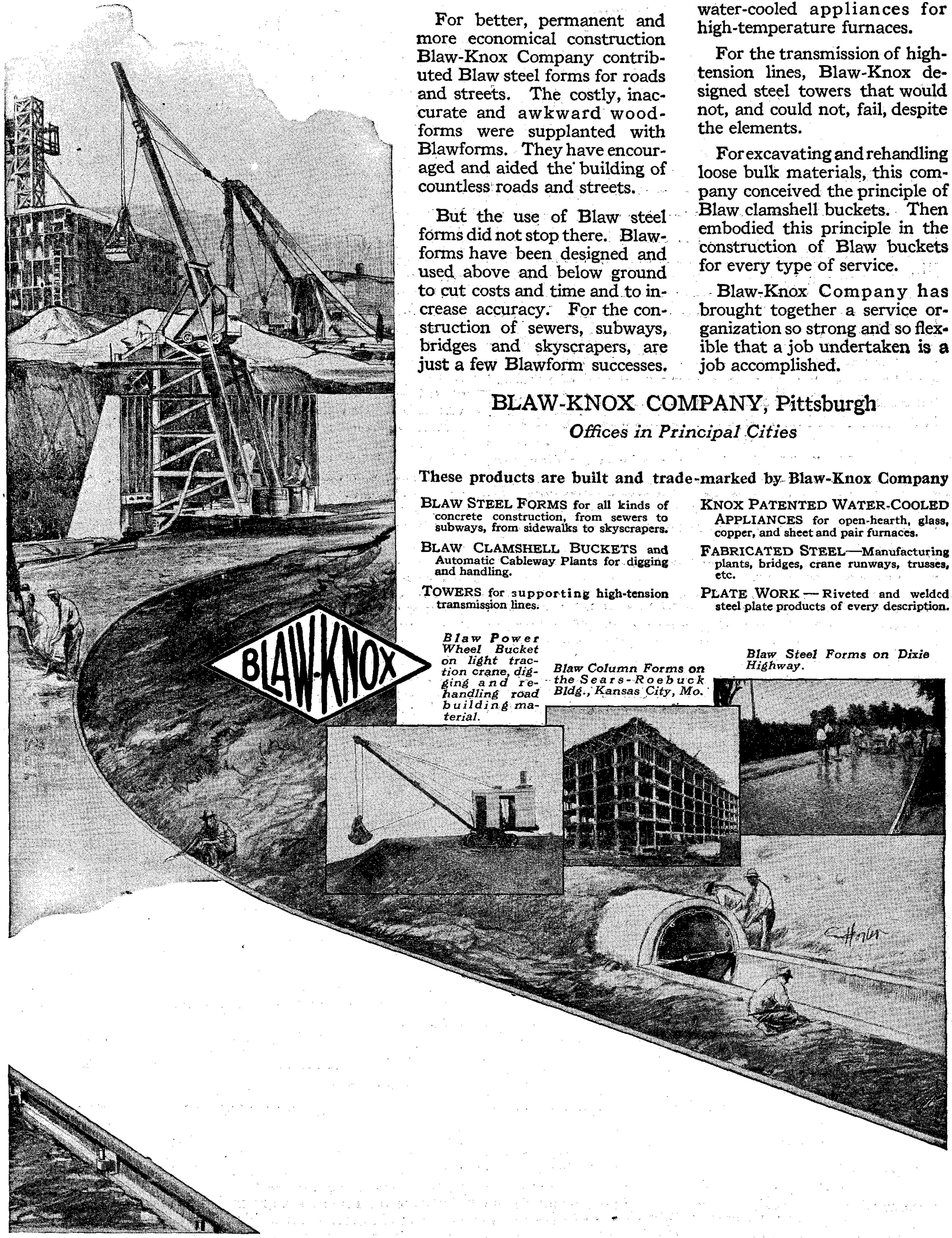

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Blaw Steel Forms on Dixie Highway.

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same source for revenues. We have heard of cases where a fine of $1 carried with it a judgment in "costs" of $19; and in small civil cases the judgments for "costs" are often out of all proportions to the gain sought by the litigant.

The Carnegie Foundation believes that a somewhat similar system prevails "all over the country." If it be true that a better system prevails in New York, all the States should study and copy the New York system.

THE OUIJA BOARD, BOLSHEVIK OF THE SPIRIT WORLD

THE LURE OF THE OUIJA BOARD has kept pace with the general interest in psychic phenomena which is very much with us, just now, especially as represented by two visiting celebrities who have come to spread its message, Maurice Maeterlinck and Sir Oliver Lodge. Whatever may be said of the psychic revelations of the Belgian poet and English scientist, Madame Ouija, as one friend has named the popular board with its moving indicator, is coming in for some hard knocks. She is said to be "the Mother of Lies," she is credited with developing a "brand new form of nervous prostration," as well as with becoming "an alarming factor in college life, as the faculty of the University of Michigan declare." Even Sir Oliver Lodge, who might be expected to be slightly prejudiced in her favor, is quoted against her. "The ouija board is too easy," he says. "It is responsible for a great deal of rubbish." "If Satan is the Father of Lies," remarks Benjamin de Casseres, in the New York *Times Magazine*, "he has a running mate that travels with him neck and neck, Madame Ouija, who is the Mother of Lies." Mr. de Casseres continues the discussion, in a characteristic vein:

Where was Mama Ouija born, or in the heart or in the head? to do a slight paraphrase of the Bard of Avon—by no means the "late Mr. Shakespeare" any more, since Mama has got him by the goatee and boils his wisdom out over her board, more of which shall appear in this.

Well, no matter where Mama Ouija was born—some say in that insane gully in the human brain that led Voltaire to declare that the Earth was the Matteawan of the sidereal system—she has planked her board right down on the lap of the earth to the delight of Homus Boobus.

Everybody's doing it. It is the new fairyland. It is the universal amusement. The Cabaret of Ghosts is running performances night and day. The spirits are crowding around us from the Five Points (and Hell's Kitchen, too) of eternity, weaving in our ear Legends of the Lost Collar-button, Sagas of the Great Booze Era, Runes of Fourth Dimensional Collectors from Trans-Material Instalment-Houses, Epics of the Confiscated Egg, and so on.

Babies used to have a layout when they bellowed their way into the world; now they are put on a ouija board and told to come across with something. Telephones are rapidly falling into the discard; men, women, and children ring up Hyperspace and talk with their ancestors and their prenatal souls. Books are being written with the aid of "controls"; the stock market has abandoned the ticker for the ouija pointer; the weather forecaster has tossed his maps and wind-measures into the river and gets his predictions from the spirits. In fact, Madame Ouija has rocked the bases of civilization and science to their gizzard. She is the Bolshevik of the psychic realm, and her *Soviet* of Ghosts threatens to fire all our Ephesian noodles and lay in ashes the little Swiss republics of our certainties.

But there are just a few of us foolish enough to keep sane in this wreck of matter and crash of reason. When a man dies he leaves behind him his clothes. He leaves behind him also some mental clothes. He doesn't quite die—and more's the pity! A sort of a shell—a habit-shell—still sticks around, fussing and maundering and poking his etherlike nose everywhere. You may break, you may shatter, the vase if you will, but the scent of the rose will cling round the old armchair still. It's something like that—these ghosts, "controls," spirits, and highly magnetized memories.

They have no brains; they are automatons, and follow the line of your wish or secret desire like a thirsty rum-hound on the trail of a Five-Star label. They bear the same relation to the immortal spark in man as do Tony Sarg's marionettes to Eleonora Duse or John Barrymore.

At the moment of Byron's death at Missolonghi, Greece, he was seen on the streets of London and later was seen to register at the King's reception. He had his *alter ego* working before death. Some work after death—ask Madame Ouija; she knows.

But the fact that these shell-game spirits lie is no more proof that they do not exist than the assertion that the human race does not exist because we are all liars. So, brethren, let us watch our step here, for these brainless auras that we leave behind will spill the beans about us on grandson's ouija board. The First Lady of the Land of Liars can't help it. She's only a reporter, and not a creator.

It is the liars, as a matter of fact, that keep the world young and amusing. A good, genial liar has imagination. The face of Truth is always characterless. If you've found the truth, well, you are through; but a cheerful liar goeth all the day—man or ghost. I believe the greatest poet and most vital being this country has yet produced was that farmer out in Ohio who gave up $15 for a seat to see the coming of the end of the world. How much more such a man gets out of life than we scoffers and truthsayers! He will make a sublime ghost, and will probably take the laurel from the brow of Baron Munchausen.

Treat 'em rough! That's the slogan when you go over the astral top. Don't slap spirits on the wrist. Don't coax, wheedle, or otherwise mush around them. Threaten to clout 'em over the ethereal conk if they don't "come across." Call them names, as I have. Accuse them of lying, forgery, trickery, and verbal counterfeiting. Bleed the lies out of their bloodless carcasses. Get the music of their vows by hurling Billingsgate at their pied brains.

I believe I am the only ouija-board fan who can make a spirit bat out a home run all around the board when I want to, or cause him to fan out before he gets his eye cocked on my question. I have peddled my way all through the Habit Shell Dimension, and returned with a basketful of newly laid goose eggs, the like of which has never been seen before. I have a veritable Who's Who of psychic liars.

Ironing out my nerve, putting on a browbeating, imperious, barytone voice, I sang out for the spirit of Jesse James, and told him to speak the truth.

"It isn't any more necessary here than there," came back across the board.

"Jesse, do you repent of the life you led on earth?"

"Only an hour ago I held up a tallyho full of sightseers from another dimension and got a good load of radium stick-pins. Well, you see, it was this way—" and the pointer stopt.

Was Jesse lying or bragging?

"Proves the indestructibility of the inherent proclivities of the primordial individual Karma," I muttered, switching on the spirit of Charles Darwin, the man who put the monkey on the facial map of man.

The great Struggle-for-Lifer bounded on the board as fit as a fiddle at a booze house-party. The pointer poked its nose into every letter of the alphabet, for all the world like a baby monkey looking for peanuts.

Now, Darwin was a great man, no matter what Corse Peyton says, and I addrest his great habit-shell in a respectful manner.

"Do you still hold to the theory of evolution, Charles?"

"I never said anything about evolution. I did write a book called 'The Descent of Man.' And from what I can see from over here he is still descending. Don't bother me, anyhow; I'm just in an interesting billiard game with old Neanderthal Skull. Fact is, Ben, there's nothing new over here; just one damn evolution after another."

"What idiots these immortals be!" I wrote in my diary, as I called for that greatest of grape-fanciers, Omar Khayyam.

This ancient barfly lumbered on to the board in a very sulky humor, I thought.

"Come out of your booze den!" I ordered, handing him a string of platitudinous abuse.

"What luck, Omar?" I asked, my voice heavy with an arid grief. Why curse the dear old jug-muzzler?

"He who lives by water shall die in water," came back mournfully.

"You mean to say, old pal, that there'll be a second Deluge without a Noah?"

"You'll find the poems in the editor's coal-bin," cut in a voice evidently on Omar's wire.

"Get that dead Harry Kemp to lay off!" thundered Omar.

"But you haven't answered my question," I said. "What luck up there?"

"All you want; but the quality of the stuff is not worth turning on the gas to get, if you're thinking of such a thing. These bent-light cocktails—"

"Chloroform him before he makes out his second will," shot over as mild a mannered spirit as ever cut a Belgian's throat or voted "Yes" on a child-labor bill.

No use. Omar had gone away, probably in the company of Poe and "Jack" Falstaff.

After all others fail, consult Napoleon.

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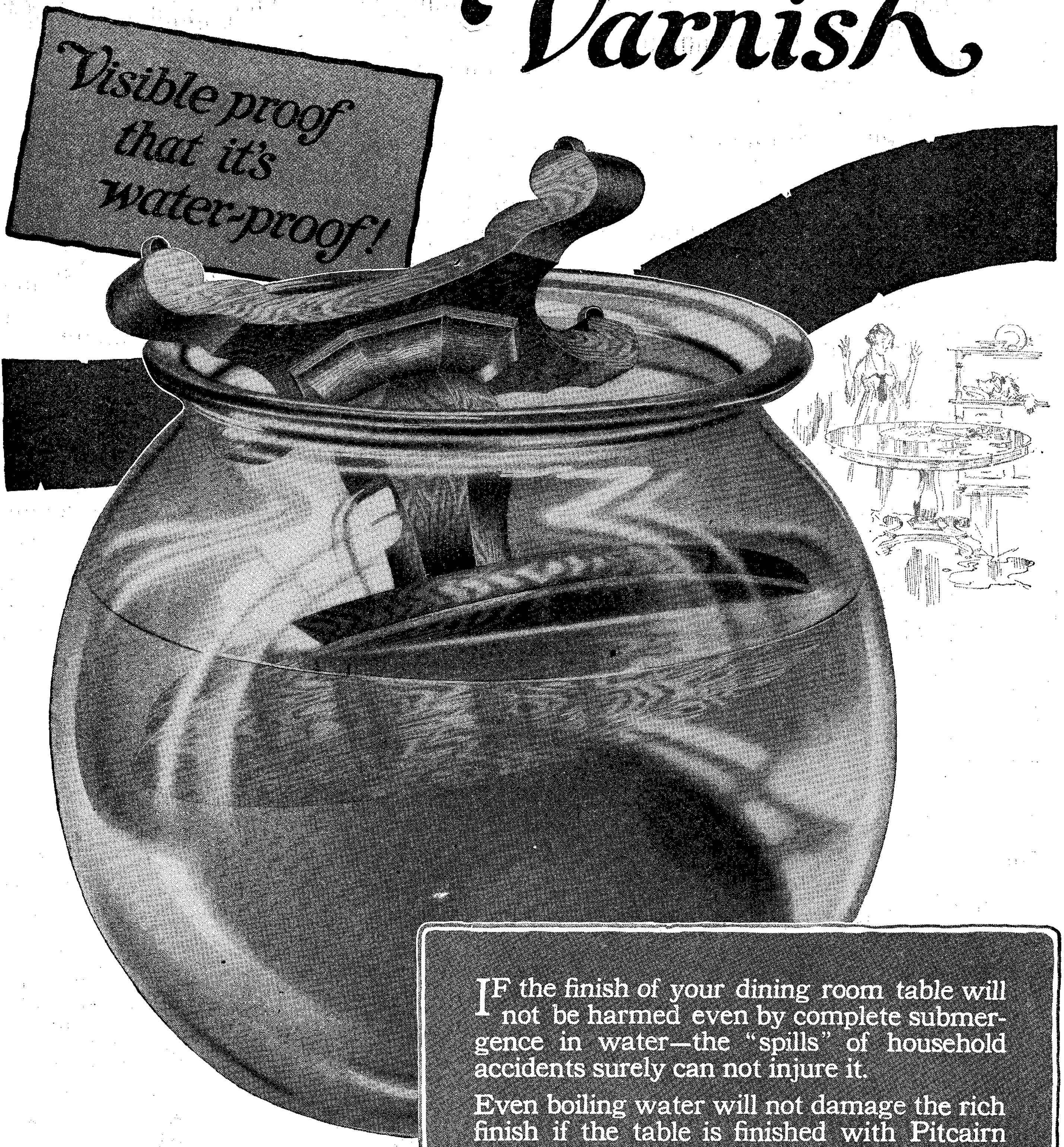
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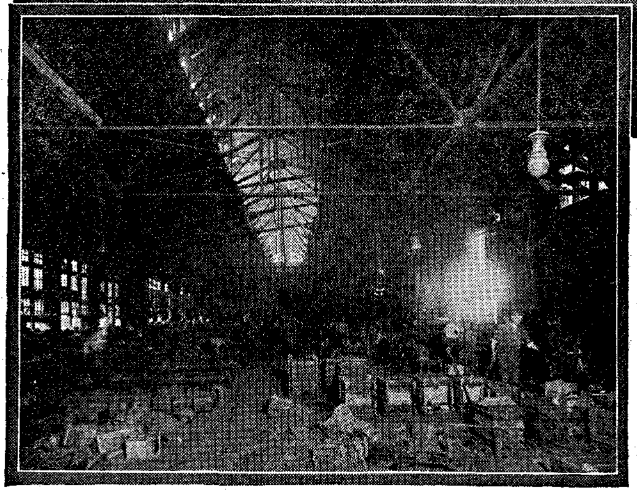

Above: Hubbard Steel Foundry, East Chicago, Ind.
Northwestern Bridge and Iron Co., *Engineers*

41,725 square feet of Fenestra sash insure maximum daylight, while 2600 lineal feet of Fenestra Operator, built as an integral part of the sash, control the ventilation. Daylight, Fire Protection and Weathering make Fenestra WindoWalls an essential to modern industrial construction.

Below: An actual photograph of a foundry NOT daylighted with Fenestra WindoWalls

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> "Do they lie over there, Napoleon?" I asked.
>
> "Like a Congressman before election!" came back the answer from the man who will some day use the Kaiser's skull for a snuff-box.
>
> "By the way," he spelled, "what became of my brandy-wagon that got lost at Borodino? And there is a brand-new pack of playing-cards hidden in one of the caves at St. Helena. I wish you would—"
>
> "No, this is the spirit of Jenny, papa. You're forgiven, but the snow you druv me into that night brought on the sneezing that ended in neumony."
>
> What's the use? They had better hand the telephone-lines over there back to their rightful owners; the service is almost earthlike. It gives one the Eternal Repetition creeps.
>
> It is not Sir Oliver Lodge, Conan Doyle, or Maurice Maeterlinck who will be of service to mankind; but its greatest benefactor will be a new Alexander Bell of the ouija board who will put in competent operators and get up a phone book, with numbers and all, of these loose-lying spirits.
>
> Good-night, Madame Ouija. There are more mysteries right on this earth than was ever dreamed of in your solid mahogany philosophy.
>
> But if the whole of the human race has gone insane, then to be sane is a form of insanity among the insane, and the insane are— Oh, but what's the good? The Luskers will be after me.

Somewhat more serious-minded is the New York *Tribune's* discussion of the ouija board, provoked by its recent record in the University of Michigan. According to *The Tribune:*

> That it has succeeded the Bible and the prayer-book in fraternity houses and students' rooms may be all too true. The story of the two young women who were so undone by ouija as to be obliged to quit college and place themselves under nerve specialists, sounds believable enough. But why pick on college students, we wonder. If ouija is cutting into the lives of the matriculated it is doing equal execution in far older and more experienced quarters. No little group of serious thinkers of any age or any clime but has its board to-day and its mediums and its tipping tables and its Maeterlinckian contacts with all the otherest kinds of pale blue philosophy.
>
> And why not? If ever ouija was to have an hour of triumph this is surely it. The background is complete. The conviction of a teetering world, moved by unseen forces to cavort in the most unaccountable fashion, is upon us all. No grand piano waltzing up a flight of stairs beneath the finger-tips of a select coterie of expert table-tippers of Greenwich Village could be half as extraordinary as that entirely scientific and respectable rocket to the moon, now building at Clark College. That radical visionary, esteemed as a voice of authority only by children, Mother Goose, turns out to have been a conservative prophet by the light of Professor Einstein's modification of the law of gravitation which treats the cow and the moon, we gather, as two soaring objects, mutually toying with each other's four dimensions.
>
> As nearly as we (from our post without the walls of vision) can sense the general situation, it is exactly as if the world were a ouija board and Mr. Maurice Maeterlinck, with half-shut eyes, had his delicate finger-tips resting on its surface and was spelling out the most marvelous and amazing things. Only the other day, for instance—it was duly announced by a silk manufacturer that a certain shade of blue had been officially selected as "Blue Bird" blue; and the same was declared to express, on the world of Mr. Maeterlinck himself, nothing less than "the warmth of the sunlit ocean, the vibration of the Alpine sky, and the restfulness of the distant mountains." If this does not sound like the utterance of ouija we should like to know what does.
>
> But we do not wish to overestimate Mr. Maeterlinck's responsibility for the current teeterings of the universe. We merely suggest his commanding and mysterious figure as typical of much that is strange and breathless and perfectly upsetting—and yet not without its lighter side, at that.

"Having created a national industry which bids fair to rival that in chewing-gum, the ouija board is now developing a new form of nervous prostration," comments the New York *Times,* and continues in the same antiouija vein:

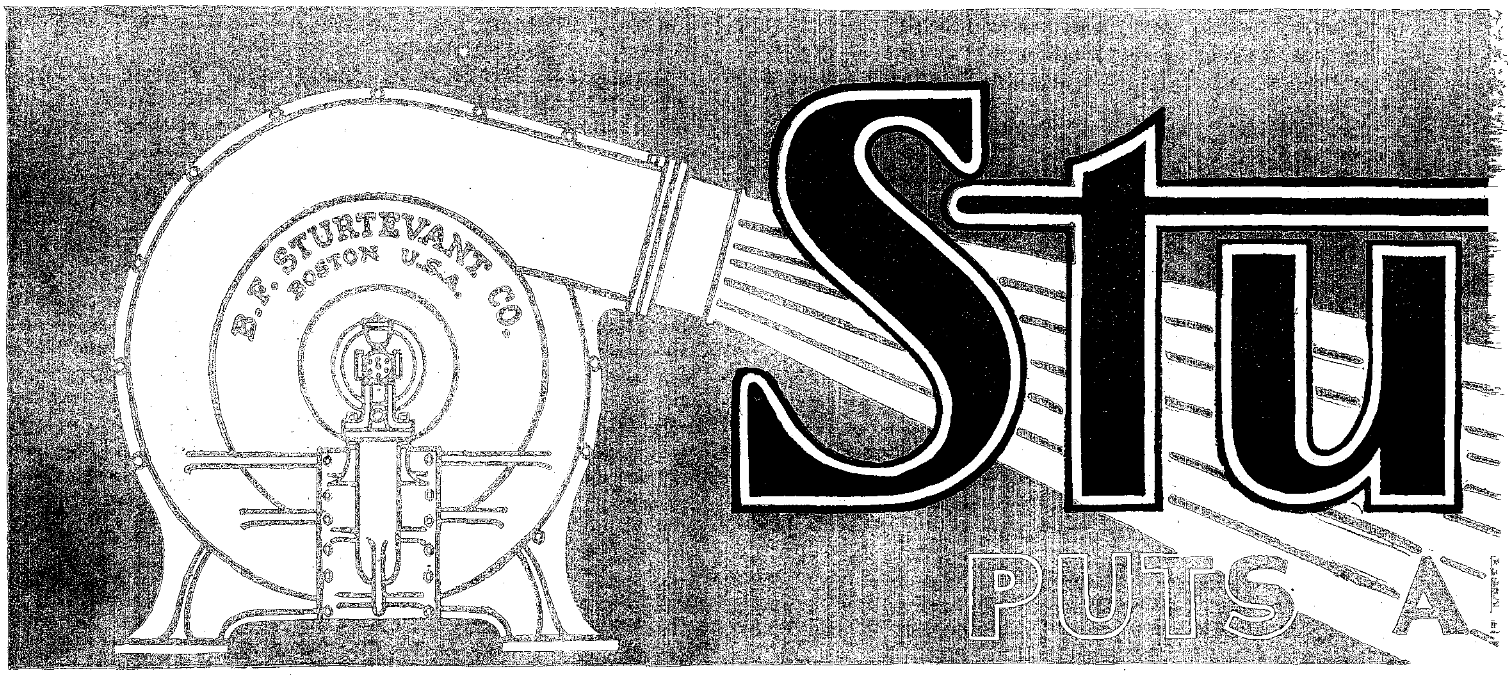
> From various seats of learning comes the report that the green tables of the undergraduate no longer clink with colored chips, having become the center of an even more breathless suspense as "spirit" messages are spelled out. At Ann Arbor the faculty foresees a swelling of the "home" and "warned" lists unless studies are quickly resumed with a view to the approaching examinations. One professor dolefully proclaims that "the lure of the ouija is becoming a serious national menace." Local medical authorities, meanwhile, report an increase of nervous diseases and prostrations.
>
> Mediumistic performances of all sorts are a strain upon the nervous forces, and the strain increases in proportion as the results are vivid and interesting. The most powerful mediums are often hysterics; and if they are not so at the outset, they eventually become so. When their sacrifices are made under skilled and responsible investigators they are doubtless justifiable. Phenomena of the most extraordinary nature have been recorded by Sir William Crookes and Sir Oliver Lodge in England; by Flammarion in France; by Schiaparelli and Lombroso in Italy; by Reichenbach in Austria. Their results have been studied and checked by a host of less celebrated investigators. Few who have read far in this new "science" will doubt that the subconscious mind has many marvelous faculties, not the least of which is that of splitting up into numerous "personalities" which display "absolute" memory, a high degree of inventive ability, telepathy, mind-reading, and originality in music and poetry. But scientific investigation is one thing and amateur dabbling is quite another. The human mind is not a mechanism which sensible folk will wish to take apart to see the wheels go round.
>
> The difficulty of establishing definite results is almost inconceivably great. Some years ago two trance mediums, one in Geneva and the other in New York, developed "spirits" purporting to be from the planet Mars. Each spoke a strange language having a vocabulary of several hundred words, and both spoke fluently with never a variation. The languages were different, to be sure, and the descriptions of life on the planet varied widely. But the same might have been the case in Mars with two spirits from the earth. One fact, however, proved sadly disillusioning. The "Martian" tongue of the French medium followed the French syntax; that of the American medium followed the English syntax. The conclusion seems warranted that both "subconscious personalities" were clever imposters.
>
> Few investigators have even been more persistent and open-minded than Frank Podmore, of the Society for Psychical Research. Toward the end of his life he wrote that he was still in doubt as to whether the manifestations he had studied sprang from a rudimentary faculty which was destined to develop new powers of the spirit or from a merely vestigial faculty inherited from our remote ancestors—who, not yet having developed the orderly, conscious mind, existed by means of powers analogous to the instincts of the animals.

AUSTRALIA'S GENEROSITY TO HER RETURNED SOLDIERS

THO, IN THE MAIN, her scheme of repatriation is similar to that of the United States, Australia goes a step further in caring for her 375,000 returned soldiers, sailors, nurses, and war-workers. She pays them while they are awaiting jobs, advances money in some instances to aid them in business, and gives to blinded men homes valued at $3,500, a sum which, because of the difference in the cost of living in the two countries, represents about double the value it would here. The work of repatriation is in charge of a special department, headed by a minister, who is assisted by a commission of seven. Each of the states has a subsidiary commission. There are vocational schools for the disabled, schools for the blind, and hospitals for those still suffering from injury, as in this country. Apprentices are guaranteed adult minimum wages the moment they resume their indentures; living wages are guaranteed to men so disabled that they can not return to normal efficiency, widows and children are entitled to gifts of household goods to enable them to reestablish their homes, and may have money advanced for the purchase of business plants and stocks to enable them to augment their means of livelihood.

Mark Sheldon, Commissioner for Australia in the United States, writing in *The Home Sector* (New York), tells us that—

> The soldier who is lucky enough to come home hale and hearty, with a desire to take his coat off and pitch in and add to the wealth of the Commonwealth, asks for nothing but a job. Here the Government steps in and sees that he gets it.
>
> If he has to wait for a while, the board assists him by loans which will assure him an income of from $10.25 to $15.50 a week until he has procured work. In considering these amounts, it must be remembered that the cost of living in Australia is virtually only half what it is in the United States. It is inter-

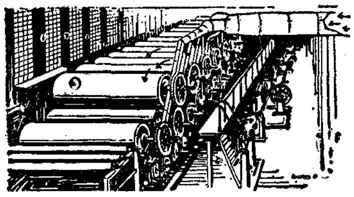

B. F. STURTEVANT CO. BOSTON U.S.A.
Stu
PUTS A

Air Control Increases Paper Mill's Output

The Sturtevant Vapor Absorption System is today conceded to be the ideal way to remove vapor from paper machines.

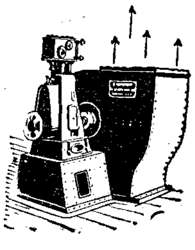
Excessive vapor in the machine room of a paper mill is like heat in an artificial ice plant. Sturtevant apparatus, by forcing a supply of dry, warm air directly on the spot where the vapor starts, and by directing the movements of the air in the machine room, completely does away with this troublesome condition.

The treasurer of a large cardboard mill writes:



"We have found that the Sturtevant Drying System has enabled us to increase the output of our machines from 15% to 20%, besides improving the board by permitting us to dry it with less heat. This has overcome our troubles caused by blisters, etc.

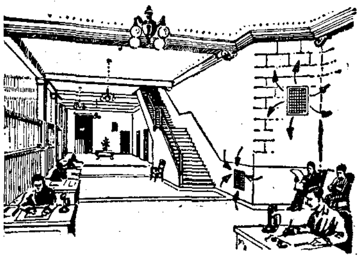
"We feel that it is one of the best investments we have made in a long time, and are pleased to give the system our hearty endorsement."



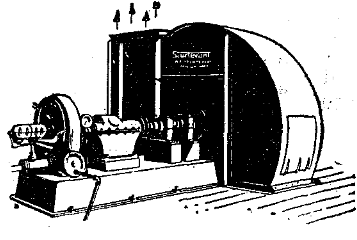
Paper is only one of the many things that require controlled conditions of temperature and humidity.

Pure Air Is as Necessary as Pure Food

Your employees are not always to blame for slowing up. It may be that you are at fault. For, if you do not furnish them with a sufficient supply of clean, pure air, you need not expect their best efforts.



Most buildings where a number of men work together need a system of ventilation. Only under the most favorable atmospheric conditions will the air come in through cracks and joints, or through open doors and windows to provide the necessary renewal of air. The modern tendency is toward the most effective and positive Blower systems.



The vice-president of a large trust company in New York states that by proper ventilation he has increased the efficiency of his clerical force.

In industries where the manufacturing processes contaminate the air, good ventilation is even more necessary, and the results of good ventilation on the workman's efficiency are even more surprising.

The Voic

Are you a maker of things? Have you work to be don
Are you seeking better ways to do your work?

Then go out. Listen to the wind. Watch what it do

It says: "Every day of your life I have been showing y
how I could do your work, and have been waiting vainly f
you to call to me. I convey twigs and chaff and even hea
things hundreds of miles. I draw all the water from leav
and from fruit and from all the trees that ever fell. I m
and I freeze. I suck up all the dirt and dust from the roa
way and leave it as clean as a ballroom floor. I bring mo
ture from the sea, and, to men who permit me, I bring pu
health-giving air for them to breathe. When I blow up

Sturtevant Puts Air to Work for the Following

Airplanes and parts
Agricultural implements
Aluminum ware
Ammunition
Artificial limbs
Asbestos products
Automobiles
Babbitt metal and solder
Bags
Belting, leather
Billiard tables and materials
Boots and shoes
Boxes, wood, paper
Brass, bronze, copper products
Brooms
Cardboard
Carpets, rugs
Carriage and wagon materials
Coffee and spice, roasting, grinding
Coffins, burial cases
Coke
Condensed milk, milk products
Confectionery
Cooperage
Cordage and twine
Carriages and wagons
Cars, general shop construction
Cash registers, calculating machines
Cement
Chemicals
Cotton goods
Crucibles
Cutlery and edge tools
Drug grinding

Dyeing and finishing textiles
Electrical machinery, apparatus
Electroplating
Emery and other abrasive wheels
Enameling
Felt goods
Fertilizers
Files
Firearms
Fire extinguishers, chemical
Foundry supplies
Fuel, manufactured
Galvanizing
Gas and electric fixtures
Gas, illuminating and heating
Glass
Glucose and starch
Glue
Gold and silver, leaf and foil
Gold and silver, reducing, refining
Graphite, ground, refined
Hardware
Hardware saddlery
Hats, fur-felt
Ice, manufactured
Iron and steel, blast furnaces
Iron and steel, steel works
Iron, bolts, nuts, washers, rivets
Iron, forgings, inc. wire nails
Japanning
Jewelery
Jute goods
Lamps and reflectors

Lasts
Leather
Leather
  finish
Lime
Lithogr
Locomo
Looking
  frame
Lumber
Malt
Marble
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Mats a
Millsto
Mineral
Models
Motorcy
Musical
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Oil, cott
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Paints
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Patent
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Paving
Peanuts
  clean
Pencils,
Pens, fo
Petrole
Phonog

EUGENE N. FOSS, President

B. F. STURTE

or one of the following 24 Bran

Atlanta, Ga. . . . . 306 Walton Bldg.
Boston, Mass. . 555 John Hancock Bldg.
Buffalo, N.Y. 101 Bedford Ave., Nye Park
Chicago, Ill. . . . . 530 S. Clinton St.

Cincinnati, Ohio 604 Provident Bank Bldg.
Cleveland, Ohio . . . 330 Guardian Bldg.
Dallas, Texas . . . 4004 Rawlins St.
Detroit, Mich. . . 406 Marquette Bldg.

Hartford, Co
Kansas City,
Minneapolis
New York, N

Winnipeg, Manitoba: Reliance Equipment Co., Ltd., 914 Somerset Block

STURTEVANT ENGI

tevant
TO WORK

the Wind

fire I increase the heat from its fuel. Why do you not mmon me?”

The work air does when controlled and directed by our paratus is so varied that we can merely suggest it. But ıen a manufacturer turns an open mind to the question, , there part of my work that air can do?” he enters upon ıew world of economies and efficiencies.

Read over the list of industries below in which air appa- .us is or can be used. Perhaps you will find your business ːre. If you do, tell us; if not, write us anyway, and we ll send you a bulletin which explains how our apparatus ı profitably do your work.

of Businesses—Is Your Business in This List?

:d,
ure
oducts
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nd parts
and ma-
ıes
ıd com-
ıng,
aphic
ıophones

Photographic apparatus
Pipes, tobacco
Plated ware
Plumbers' supplies
Printing and publishing
Printing materials
Pulp goods
Pumps
Refrigerators
Rice, cleaning, polishing
Roofing materials
Rubber goods
Saddlery and harness
Safes and vaults
Salt
Sand and emery paper, cloth
Saws
Scales and balances
Screws
Sewing machines, attachments
Shipbuilding
Showcases
Signs and advertising novelties
Silversmithing and silverware
Slaughtering and meat packing
Smelting and refining
Soap
Soda water apparatus
Sporting and athletic goods
Springs, steel, car, carriage
Stamped and enameled ware
Steam fittings, steam and hot water heating apparatus
Steam packing
Stoves and furnaces

Structural iron work
Sugar, refining
Sulphuric, nitric, mixed acids
Surgical appliances
Tin plate and terneplate
Tobacco, chewing, smoking, snuff
Tools
Toys and games
Trunks and valises
Turpentine and rosin
Type founding
Typewriters and supplies
Umbrellas and canes
Varnishes
Wall paper
Wall plaster
Washing machines, clothes wringers
Watch cases
Watches
Wheelbarrows
Whips
Windmills
Window shades and fixtures
Wire
Wireworks, inc. wire rope and cable
Wood distillation
Wood, turned, carved
Wooden goods
Wool pulling
Wool scouring
Wool, shoddy
Woolen and worsted goods
Whalebone cutting

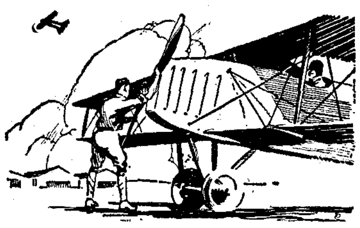
COMPANY HYDE PARK, BOSTON, MASS.

the United States and Canada

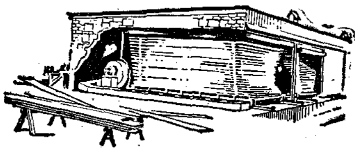
ı6 Pearl St. Philadelphia, Pa. . . . 135 N. 3rd St. Salt Lake City, Utah. .Walker Bank Bldg.
ance Bldg. Pittsburgh, Pa. . . . . 711 Park Bldg. San Francisco, Cal. . 759 Monadnock Bldg.
Life Bldg. Rochester, N. Y. . . 1108 Granite Bldg. Seattle, Wash. . . 1134 Henry Bldg.
erbilt Ave. St. Louis, Mo. . 2086 Ry. Exchange Bldg. Washington, D.C. 1006 Loan & Trust Bldg.
Montreal, 404 Birks Building Toronto, 210 Lumsden Building
OMPANY, LONDON

The Lumber-Drying System That Made Possible the Large Airplane Output

The wood that enters government airplanes must be flawless. During the war, the government experienced difficulty in getting a supply of properly seasoned wood, sufficient to keep pace with the rapid output of other airplane parts. At least, such was the situation until the merits of the Sturtevant High Humidity Kiln Drying System became recognized.



With Sturtevant apparatus lumber is seasoned as well in a few weeks as it formerly took years to do. Warm, moist air coaxes the water from the center of the wood first, drying the whole thoroughly, quickly, evenly—with a new minimum of warp and crack.



This is a new Sturtevant system. It is destined to influence the whole lumber situation.

Many large manufacturers have already increased their profits and made certain of their lumber supply by the installation of this drying system.

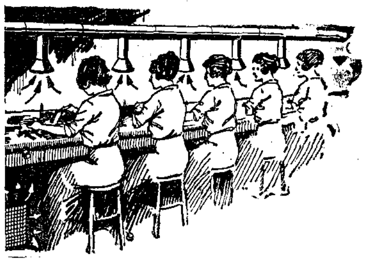
Intense Heat That is Never Felt

Sturtevant apparatus helps to make more pleasant working conditions in many industries.

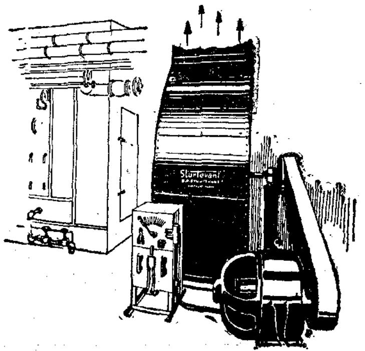
In a certain large factory girls in a long line sit close together and weld pieces of metal over Bunsen burners.

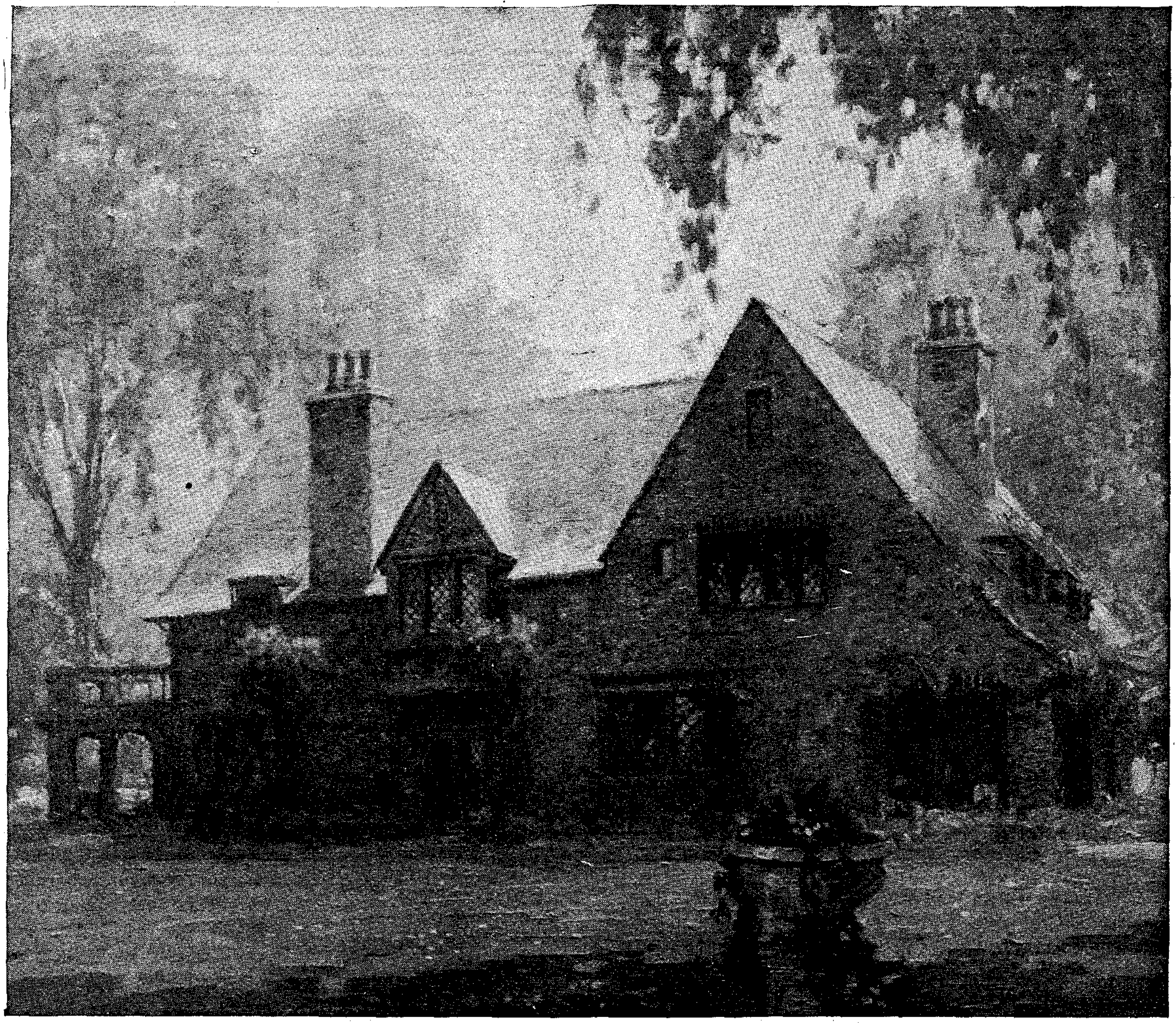
Every one of these girls is spared the intense heat of the Bunsen flame and the fumes of the burning metals; for Sturtevant apparatus controls the flame's heat and sucks the part that is not used into the outer atmosphere.

To make the ventilating system more efficient, Sturtevant Blowers force a supply of fresh, cool air into the room at the feet of each girl.



Without proper ventilation, even strong men could not engage in this work without soon feeling the harmful effects of insufficient oxygen and the escaping gases of burning metals.





Painting after House by Murphy & Dana, Architects

The ABIDING CHARM
of the House of BRICK

TO the builders of permanent homes, Face Brick offers a potent appeal. Durable as stone or granite. Affording safety from the fear and fact of fire, and comfort through all seasons. Beautiful when completed, and mellowing with age—color blendings and harmonies beyond the scope of other materials. Not cheapest in first cost but, viewing the home as a permanent investment, the most economical of building materials. Send at once for "The Story of Brick"—the supply is limited.

American Face Brick Association
1134 *Westminster Building* . *Chicago*

A·F·B·A
USE FACE BRICK
—*it Pays*

"THE STORY OF BRICK"
An artistic booklet with attractive illustrations and useful information for all who intend to build. The Romance of Brick, Extravagance of Cheapness, Comparative Costs, How to Finance the Building of a Home, are a few of the subjects treated. Your copy is awaiting your request. Send today.

> esting to note that the Premier introduced a bill in the New South Wales Parliament to aid reemployment of service men by compelling former employers to take them back, and providing that they should be given preference in general employment.
>
> The most far-reaching effort made by the Commonwealth to give the able-bodied service man a square deal is the provision for settling him upon the land. This is no half-handed measure, no mere opening up of government lands with permission for "squatting." It is a plan to enable every man with the desire and ability to make a success out of agriculture to get to the land.

To the states was given the task of settling the ex-service men on the land, as the states own the public land and have established land and agricultural departments to promote settlement and stimulate production. The Commonwealth Government undertook to do its share by advancing a sum of approximately $2,500 for each soldier who became a settler. Before being given a farm each applicant must demonstrate his aptitude for the life, tho it is not necessary to have previous experience. Other methods of assistance are in use:

> For those who pass the test the states maintain training-farms where courses are given to all applicants. The Commonwealth again bears part of the expense of this process, subsidizing the state farms dollar for dollar, and paying sustenance to the men during training. Men who do not show ability to solve the problems of agriculture are trained for some other trade.
>
> If the graduate of this course has to wait before a block of land is ready for him, he is paid sustenance until he is placed on a farm, and his family and property, within reasonable limits, are transported at government expense. The state continues to support him.
>
> What this is costing is rather hard to estimate. Figures of Commonwealth expenditures are available, showing an expenditure of $11,563,415 between April 8, 1918, and the end of the fiscal year, June 30, 1919. Of this sum $1,531,685 was expended for administration, $3,341,410 for buildings and equipment, $567,325 for contingencies, and $6,122,995 was distributed directly. During this period 130,140 applications for assistance were received and assistance granted in 112,227 cases.

THE OIL METHOD OF GETTING RICH OR "BROKE"

"IF YOU HAVE NOT YET BEEN INVITED to invest in oil securities, be patient," advises Charles Moreau Harger, who has a somewhat intimate acquaintance with the vast new midcontinental oil-fields of America. The development of the oil industry in this region has been such, he tells us, that its ramifications "reach from the remotest farm and hamlet to the highest sky-scraper on Wall Street." Hence it follows that everybody will be given a chance to take part in what the writer describes as "an adventure teeming with visions, thrills, and high finance." A perusal of Mr. Harger's account, however, leads to the conclusion that when an opportunity to "invest" in the great enterprise does come, it would do no harm to give the matter, say, at least a half hour's careful consideration. True, there are dazzling tales of sudden riches acquired in the oil-fields, outdazzling anything ever told of the "Forty-niners." However, even leaving out of consideration the fakers engaged in the oil-game, when one reflects that, in the language of a prominent oil man quoted by the writer, "no one can tell with certainty what is hundreds of feet underground," even in the richest oil-region on earth, it appears that there is practically no more assurance that a man will "strike it rich" in oil investments than in any other speculative enterprise. "One company last year, at a cost of half a million dollars, drilled forty wells, only three of which were good producers," Mr. Harger informs us. And it seems that this was not a "wildcat" company either, but one of the big producing organizations which possess every facility to insure success in their pursuit of the precious fluid, and annually set aside several hundred thousand dollars solely for prospecting operations. The average person who invests his savings in oil does not usually have a chance to do business with a concern of that kind. He is more likely to invest with a company of "promoters." What we infer is a typical example of how such an organization operates is set out by Mr. Harger in *Scribner's Magazine* (New York):

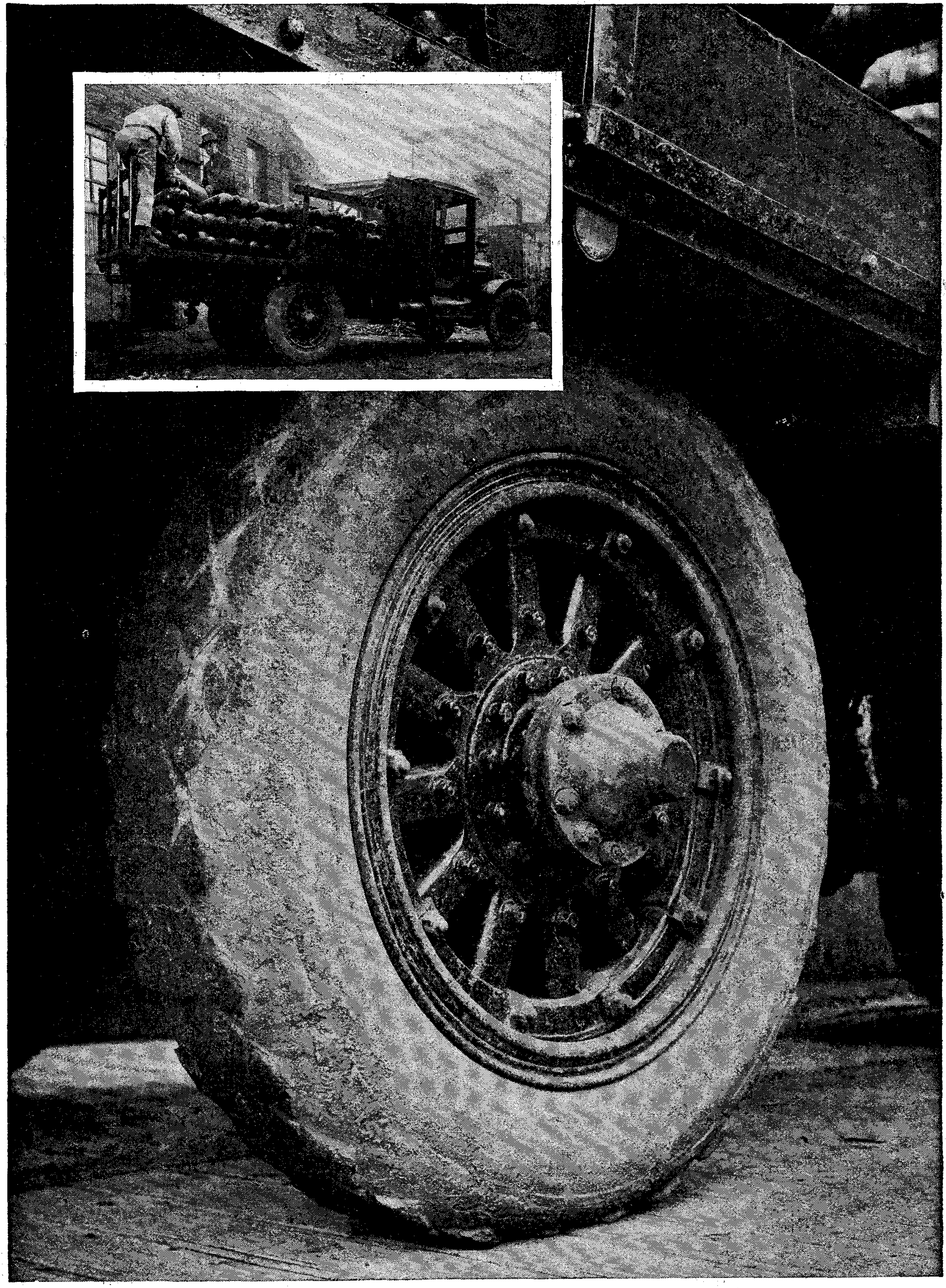
> At the beginning is the spying out of the land. Three men in a Ford car, carrying spades, pickaxes, tripods, and levels, come quietly into town, putting up at the second best hotel. For days and weeks they travel over the country measuring, digging, taking note of slopes, valleys, hills, and the outcropping ledges of rocks. Then as quietly they depart.
>
> A little later come three other men—alert, well drest—who put up at the best hotel. They hire motor-cars and drive over a portion of the country, stopping at every farm in a selected section.
>
> "We want to lease your farm for oil," is their introduction. "If we can get, say, 10,000 to 25,000 acres leased, we will put down a well inside of a year, and you will know whether or not there is oil here."
>
> "What you paying for leases?" comes back the question.
>
> It is explained that one dollar will be paid for a lease on the farm for one year, the farmer to get one-eighth of all the oil produced on his land, delivered free to the pipe-line. ..... The farmer signs; so do his neighbors, and suddenly the county wakes to the first ebullition of an oil boom.

The promoter now hies himself to the East. He informs brokers that he has a good "wildcat prospect." He probably sells two-thirds of his leases on 25,000 acres for $3 an acre. He can dig his well, which will cost $30,000 or $40,000, and still have some money left, even if it turns out to be a dry hole. The broker then disposes of the leases at a good profit to people anxious to get "in the oil-game." If indications of oil are strengthened as the well-drilling progresses, a promoter will probably offer the farmers who own the land a few thousand dollars for a fourth interest in their royalties. This fraction, which then represents a thirty-second of the total production, if any, is capitalized for $100,000 and sold to investors in "units" of $100 each. These "units," and with them a doubtful chance to a tiny share in the problematical profits, are purchased by all classes, says Mr. Harger, "from the banker to the laborer; from the widow to the salesgirl and the school-teacher." It is admitted that they take long chances. Many wells prove dry, and others produce so little that no profit accrues. It seems that the only persons who operate under a sort of "heads I win, tails you lose" proposition are the promoters, who, it is said, always win. But what happens if the men who made the first survey guessed right, and a "gusher" is actually struck? We are enlightened thus:

> The well when it is down 2,600 feet suddenly becomes a fountain of oil, sending forth three thousand barrels a day worth $2.25 to $2.70 a barrel! Then is the thrill of a lifetime! The value of the leases held by a single company, or by smaller investors down east, soars; units of royalties near by, marketed at $20 each, go up to $100 and more; royalties on all the surrounding farms jump to tens of thousands cash; other wells are started as rapidly as machinery can be secured. Other promoters have by this time secured leases for twenty miles around, paying perhaps $50 or $1,000 an acre and they repeat the history of the Fragrant Hill well with greater ease.

Wild tho the exaggerations of the promoters may be, we learn that in some cases they are outdone by the reality. A few examples are furnished:

> One well in the midcontinent field has produced an average of 1,000 barrels a day for fourteen months, a total product of over $1,000,000 on an initial investment of $25,000. Nor need one tell more than a half truth about the Trapshooters' company and still be able to dumbfound the credulous prospect. Originally it consisted of a dozen members of a gun club, who invested $250 each. The first well was 200 barrels a day; the second started at 14,000 barrels a day. Soon they had so much money they could give all their time to the gun club. One $100 share sold for $41,000. Over $6,000,000 has been paid on their royalties to Indian wards—Osages, Cherokees, Creeks—in the past three years, and the humblest member of the tribe is a king of finance. What the promoter does not tell is the history of hundreds, if not thousands, of oil companies based on nothing more than a lease on a piece of land without the faintest prospect for oil and where no serious effort ever was made to find any. The ignorance of the average investor of the whole oil business has made it easy to induce investment in absolutely worthless securities.



Large photograph: Goodyear Cord Tire after nearly a year of hard trucking service for Indiana Oxygen Company, Indianapolis. Insert: Goodyear-Cord-equipped truck of this company unloading cylinders in foundry yard

Copyright 1920, by The Goodyear Tire & Rubber Co., Akron, O.

GOODYEAR

Haul on Pneumatics
—Save Trucks, Loads, Roads

> *"WE make more deliveries and cover more ground on Goodyear Cord Tires than we ever could on solid tires—repairs are far less and our driver works better on them. We find Goodyear Cords tough and altogether economical."—W. L. Brant, Sec'y and Treas., Indiana Oxygen Co., Indianapolis*

STATEMENTS like this one strikingly illustrate how perfected pneumatic truck tires are increasing the range and value of motor transportation.

In removing the limitations imposed by solid tires, the pneumatics have set free the full abilities of motor trucks to serve with utmost result.

Due to the Goodyear Cord construction, originated by Goodyear thirteen years ago, the pneumatic truck tire has been made entirely practical and brought to its present high efficiency.

For it is this construction which underlies every element of advantage in the advanced pneumatic truck tire; its traction, cushioning, toughness, nimbleness and all-around economy.

Today Goodyear's pioneering work is expressed not only by the production of Goodyear Cord Tires for trucks, Tubes, Rims and Repair Materials, but also by its contribution to the development of proper engine pumps, wheels, air gauges and vulcanizing equipment.

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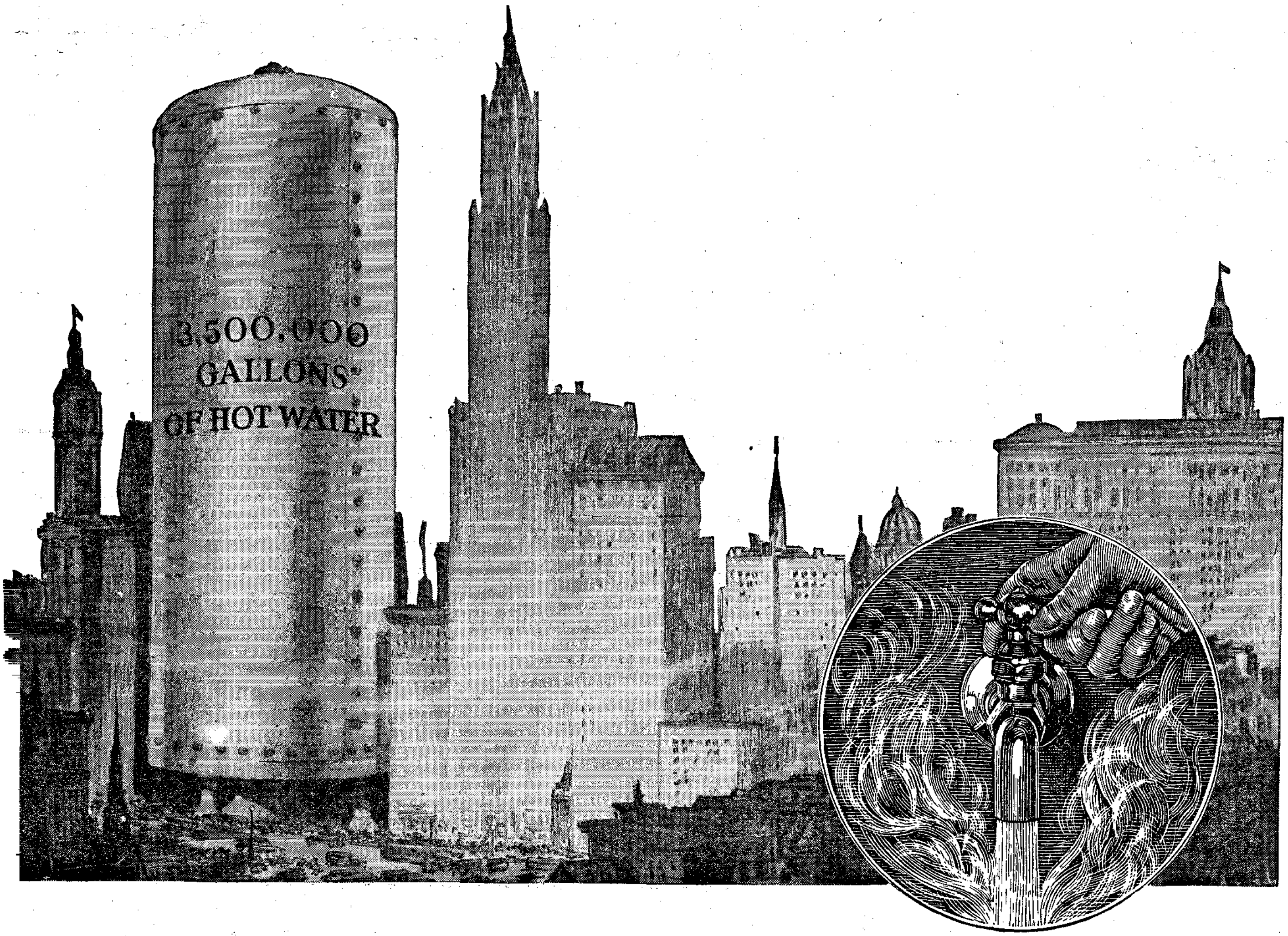

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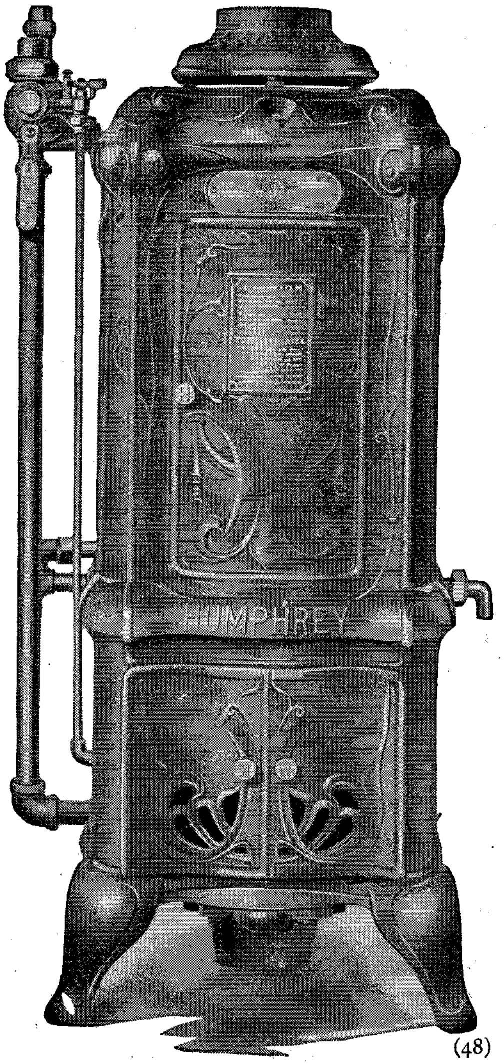

(48)

PERSONAL GLIMPSES
Continued

TEA, WOMEN, MEN, AND CONDITIONS IN PARAGUAY

THAT tea with a "kick" may be imported from the small inland South-American Republic of Paraguay should thrill all thirsty souls in these unfeeling United States, and, when the fact becomes generally known, there is little doubt that every grocery will lay in a bountiful stock of the pepful article. *Yerba mate* is the name under which this life-saver is known in its own country, and it has been known here for some time as "Paraguay tea." It was recently described in our science department. According to Henry Hulme Sevier, who furnishes an account in the New York *Times Magazine* of his experiences in the southern republic, it is the real thing. "It will certainly buck one up," he says, and we are told that a large proportion of the people of Central South America are addicted to it. Apart from its production of *yerba mate*, Mr. Sevier found Paraguay an interesting country in many other ways. Of its population of something less than 800,000, about 100,000 are wild Indians, he says, while of the rest, an overwhelming majority are still classed as illiterate, altho we learn that the country is awake to its possibilities and making rapid advancement, especially along commercial lines. We read:

> Paraguay's struggle for commercial existence began something less than two generations ago, when it was compelled to abandon its favorite national pastime of waging war because of exhaustion of human material necessary to carry it on.
>
> From the start its great handicap has been Paraguayan money. It is but one of the Latin-American countries whose finances are on a basis of inconvertible paper of fluctuating value, but it has suffered by reason of financial instability more than any of the others. It has no coinage of gold or silver, and all the internal commerce of the country is conducted in depreciated paper currency issued in denominations of 50 centavos and upward. The rates of exchange are based on the price of Argentine paper currency, and change from day to day according to the demand. Merchandise which costs to-day, we will say, 3,500 pesos, may be purchased in a month for 3,000 pesos, or, on the other hand, may cost 4,000 pesos. This uncertainty has always kept business on a highly speculative basis.

The women of Paraguay outnumber the men, ten to one, we are told. This is the result of the time when the country's "favorite national pastime was war," which killed off the males to such an extent that when they finally concluded to quit scrapping there were twenty-five women for every man. In this connection, Mr. Sevier furnishes the following glimpse of the history of Paraguay:

> Paraguay, with its 171,814 square miles, is considerably larger than the State of California. Its population is something less than 800,000. Of the latter 100,000 are wild Indians and an overwhelming majority of the remaining 700,000 are still classed as illiterate. The women outnumber the men ten to one, which really indicates a considerable gain for the male sex, because fifty years ago the score was said to be twenty-five to one in favor of the women.
>
> It was in 1870 that the nation gave up fighting as an exclusive occupation. It lacked the man-power to carry it on. Through several sanguinary campaigns Paraguay had devotedly followed the fortunes of the bloodthirsty Lopez—a brilliant soldier but a merciless tyrant—fighting Brazil, Uruguay, and Argentina, in turn and in combination. Admittedly the best soldiers in South America, they could not stand up indefinitely against the overwhelming odds presented by the alliance of her three powerful neighbors. After a succession of defeats, in which the Brazilian Navy operating a thousand miles from the open sea played a part; with their ancient capital, Asuncion, in possession of the enemy, the remnant of General Lopez's army fell back into the forests of the hinterland and scattered through its jungles.
>
> Historians tell us that five-sixths of Paraguay's population perished in her wars. Of the surviving one-sixth a small fraction returned from the wilderness after the departure of the invaders, once more to set up a government of their own and to maintain in the land a semblance of law and order. They were mostly ranking officers of Lopez's vanquished army, and their fortitude, perseverance, and industry proved equal, in a measure, to the task before them. Paraguay is to-day a free and independent nation, admittedly far behind in development and enterprise, but it is to the everlasting credit of those soldiers and their sons that no serious effort has ever been made by more powerful and ambitious neighbors to invade and subject their country.

Asuncion is the capital of Paraguay. It has a population of 80,000, and is the only Paraguayan city of importance. It is described as the center of the commercial, financial, and political interests of the country, and like every other city in a state of transition from antiquity to modernity, we are told that it presents an interesting combination of the new and practical, the impractical, and the picturesque. Says Mr. Sevier:

> Asuncion's evolution from a stockaded outpost to a modern national capital has occupied the better part of four centuries, and it is yet far from being complete. In some sections of the city the surroundings are so wretched, the manner of living is so unsanitary and primitive, that an impression of retrogression rather than progress in the human condition is unavoidable. The enormous municipal market, where something of everything that is made or grown in Paraguay is offered for sale, and where three-fourths of the city's inhabitants purchase their every-day requirements, is a malodorous and noisome spectacle. The produce is dumped out upon none too clean floors and displayed with little discrimination and less attractiveness.
>
> Asuncion has an electric-light plant and an electric street-railway, privately owned and operated, but as yet no telephone system. Main Street is no Great White Way, but in general appearance it is not unlike Main Street in some of our own growing and thriving cities of 80,000. Several of the big stores have commodious, well-ordered salesrooms with surprizingly complete stocks. The smaller shops are rather provincial, claiming the interest of the stranger chiefly because of the articles of native workmanship and the curios they offer. The hand-manufacture of silver ornaments, crudely original, and lace-making are among the active industries of the country.
>
> Asuncion's nearest approach to a skyscraper is an office building four stories high. The President's Palace, a long, stately edifice with two wings forming a semicourt, so arranged that every cool summer breeze that blows is circulated through its spacious corridors, is an excellent example of architectural adaptation. A number of other government buildings, including the General Post-office, the National Library, the Museum, and the Arsenal, possess architectural merit. The railroad station, altho its only important arrival and departure is the weekly International Express from and to Buenos Aires, is a tremendous and ornate affair. Its driveway has a much wider clearance than has the Pennsylvania Station in New York, and its gateway is certainly more elaborate. It faces, with a massive, dignified colonnade, the city's main plaza, the scene of numerous stirring combats and historical incidents of a violent past.
>
> The residence section of the wealthy class of Asuncion is clean and attractive. Its buildings give evidence of good taste and refinement, if not of luxury. Architecturally, the Spanish influence dominates, but there is a flavor of the South American which makes for picturesque effectiveness. Very little lumber is used in the construction of buildings in this part of the world. The material is mostly concrete or adobe. The exteriors of the residences are usually white, but occasionally they are tinted to a shade of delicate pink. The white houses have roofs of red tiling; the pink ones are generally crowned with roofs of a pale blue. Slightly substantial iron grilles, a heritage of old Spain, ornament the windows and doorways; the floors are laid with tiling of many colors and fantastic designs. Every home, of any pretension at all, has its quaint *patio* studded with luxuriant tropical plants. Tall palms droop their branches languidly over high garden walls of pink or light-blue stucco, meeting the boughs of fruit-laden orange trees that border the sidewalks.

An interesting description is given of the trip by rail through Argentina by which Mr. Sevier reached Paraguay. The appearance of the country reminded him of certain sections of our own country, but many other things, such as strange animals and birds, also reminded him that he was far from home. As we read:

> From the windows of the comfortable observation car the passenger from other lands is attracted by sights and objects that are amusing and entertaining. The broad, far-reaching pampas are remindful of the prairies of Texas and Kansas. Barbed-wire fences inclose the railroad's generous right of way, but the cattle that graze peacefully in the distance are not like the cattle one usually sees on the open ranges of our Western States. These look as tho they might all have been prize-winners at some recent live-stock show. They are sleek and fat and obviously highly bred. Offering variety to the pastoral landscape, at frequent intervals long-throated, solemn-looking ostriches, entirely

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PERSONAL GLIMPSES
Continued

naked save for an absurd bunch of bustle-feathers, are observed stalking majestically through the tall grass. Now and then a bunch of foolish-faced llamas—the pack-mules of the southern country, which are neither mule nor goat nor giraffe, but possess some of the bodily features of all three—started by the rumble of the train, trot off toward the brush.

The herd-riders, who appear from out of the chaparral occasionally, or are seen galloping along the dusty roads behind bunches of steers, are reminiscent of our Western cowboys only in the graceful, negligent way they sit their horses. They are known as *gauchos* down in South America, and instead of the big white stetson, the short canvas jacket leather "chaps" and high-heeled boots affected by the North American "puncher," the *gaucho* wears a low-crowned, flat-brimmed *sombrero* and an all-enveloping *poncho*, or blanket, that hangs from his neck to the tips of his low-topped, fancy-colored boots. When not in the saddle, the *gaucho* throws one end of the *poncho* back across the left shoulder, in much the same manner that the Spanish *señorita* drapes her delicate lace mantilla. His trousers are tight-fitting and long-waisted, like the toreador's. The saddle of this rough-rider of the pampas is a dinky affair, as insignificant as the English country gentleman's, and apparently too light for strenuous struggles with the heavy Argentine steer. It is innocent of pommel and has no back support, but the *gaucho* prefers it to what he scornfully terms a Texas "rocking-chair," and the Texas cowboy has nothing on him when it comes to expert roping and daring horsemanship.

The last lap of the up-trip to Asuncion is reached when the International Express arrives at the Argentine frontier town of Posadas. Here the entire train, with the exception of the locomotive, is shunted on to a specially constructed ferry-boat which carries it across the broad Rio Alto Parana and deposits it in the Paraguayan village of embarkation. The journey thence to Asuncion, 232 miles, is over the first railroad constructed in South America.

Americans are inclined to think of their own Mississippi as the greatest river in the world, but occasionally one traveling in distant parts of the earth has his attention called to the fact that there are other streams as well. Mr. Sevier seems to have been much imprest by the mighty Rio de la Plata. He says:

The traveler usually goes back to Buenos Aires by boat, especially if the up-trip has been made by rail. Down stream the time is only three days, as against five days when bucking the current. The accommodations do not suffer by comparison with those of the river and lake-boats of the United States, and there is much to be seen that is educational and enlightening.

The Rio Paraguay becomes the Rio Parana after it has been joined by the waters of the Alto Parana, about two hundred miles below Asuncion. Then, after the confluence of the Rio Uruguay, a short distance above Buenos Aires, it is called the Rio de la Plata. Few rivers can match these three in majesty. At Rosario the Parana is twenty miles wide, and would give the impression of the broad sea were it not for the cluster of poplar-clad islands

PERSONAL GLIMPSES
Continued

that intercept the view. It is estimated that the Parana, during the floods, rolls down into the Rio de la Plata, 1,650,000 cubic feet of water per second, a much greater volume than the Mississippi discharges at any time, and probably equal to the best efforts of the mighty Amazon itself.

Asuncion is 1,200 miles from the sea, but thanks to this magnificent system of waterways, it can claim to be a deep-water port almost all the year. The Rio Paraguay broadens out to the proportions of a small bay in front of the city. Scores of all manner of floating craft are always at anchor in the harbor, and in appearance, at least, it is the "port" it claims to be. For 300 miles or more above Asuncion the river is navigable for sizable boats, and the traffic is considerable, due to the increasing number of quebracho logging camps, and the cattle ranches that are being opened up to feed the packing-houses farther down the stream.

THE NEW AND LIVELY JOB OF AIR-REPORTING

A NEW craft has come into being, that of the air-reporter. At present the craft comprises but a handful of volunteers from the ranks of the camera men employed by the film news-weeklies. "It is a new craft," Charles Gatchell, writing in *The Picture-Play Magazine*, tells us, "because it has been only within the last few months that it has ceased to be merely an occasional novelty, and has become almost a weekly part of the work of covering great out-door events." The camera man who hopes to hold the interest of a picture-loving public surfeited with the wonders of the modern screen must always be striving for the sensational. He describes a parachute-drop from an aeroplane at Washington:

> The leap was to be made by Sergeant "Billy" Moon, who, in making experiments with aeroplane parachutes, had made some forty-two such descents on the other side during the war.
>
> Two camera men were to record his drop. In the front cockpit of the bomber from which he was to leap was stationed H. D. Blauvelt, veteran celluloid sharpshooter, who, with his camera, has followed strange trails in search of pictorial novelties over half the globe. "Bee," to use his nickname, was to record the picture of the lad as he edged his way out along the wing and swung off, while in a smaller, more agile plane, Tommy Baltzell, the "upside-down camera man," as they call him on Bolling Field, was to be spiraled round and round, following the sergeant on his descent. Beside the pilot of the bomber, and just behind "Bee," was stationed E. Cohen, editor of the *Pathé News*, who was to direct personally the taking of the pictures. When all was ready, and the great engines had begun their deafening warming-up explosions, the sergeant crawled up into the rear cockpit and sat there, calmly awaiting the moment for performing the "death-defying feat," which, to him, was but part of the day's work, while I wedged in beside him. There was nothing for me to do. It occurred to me that I was like the young man at the funeral who "just went along

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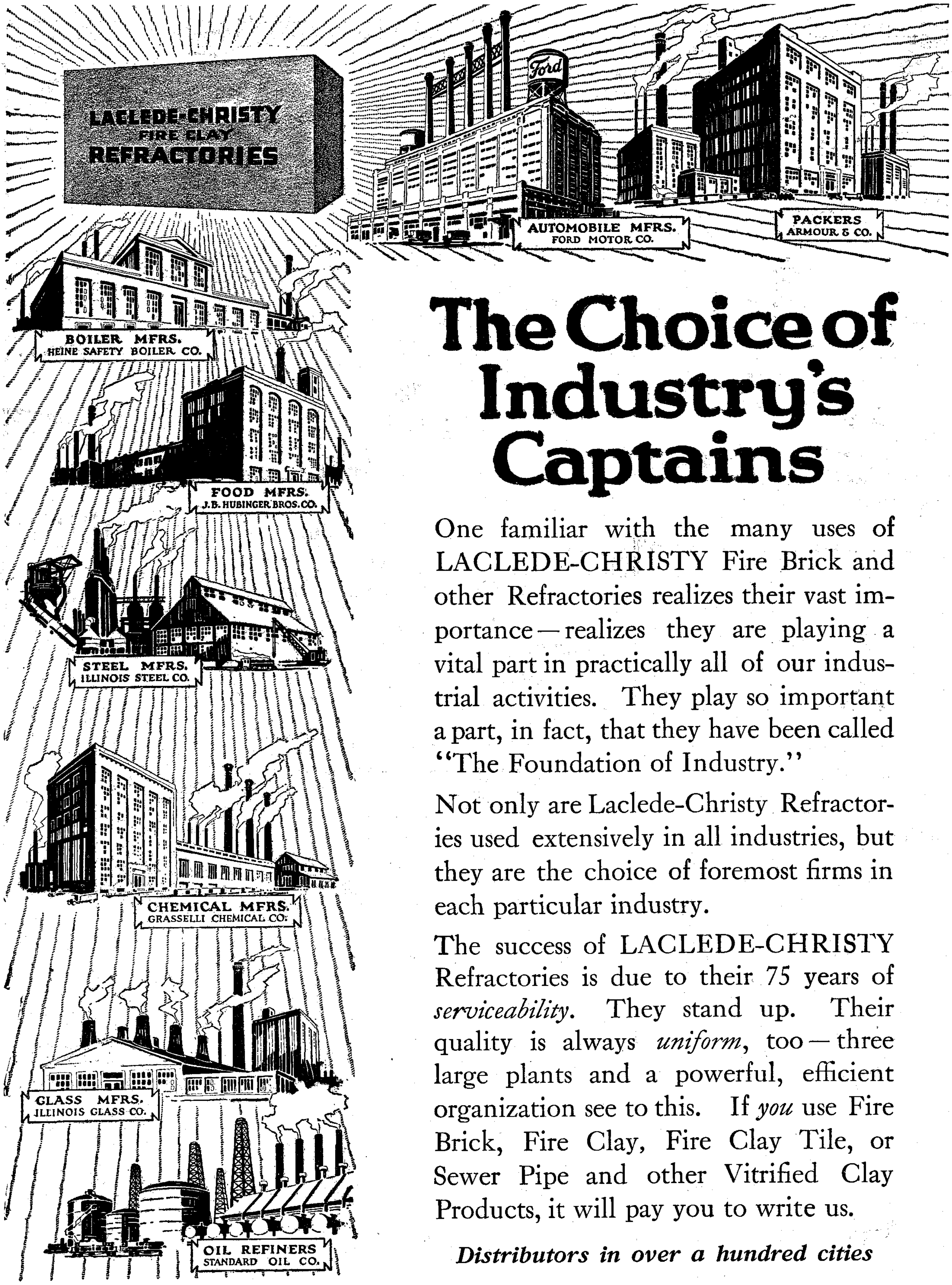
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PERSONAL GLIMPSES
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for the ride." One thinks of so many things to collide with the parachute. Certainly it was a bit of skilful maneuvering, as the picture showed, and I have described the incident because since these pictures were recently shown in the news reel, I am sure that a good many of my readers will remember having seen it.

Once down on the ground again, our generalissimo hurried over to headquarters to call up New York. For at no time was he long away from a telephone. Having camera men on assignments scattered all over the world, whose work he is constantly directing, is no small task. That morning he had sent two cables to Europe, besides several telegrams to staff men in different parts of the United States and Canada. Then we were told that Lieutenant Patrick Logan, the stunt man extraordinary, was ready to perform some spectacular flying, which Tommy was to record on celluloid.

Watching the taking of these stunt pictures taught me one interesting thing in connection with motion-pictures of aeroplane-flying. I had seen, some months before, some wonderful pictures of that kind, and at the time I had felt that I was being cheated of the real effect of watching aeroplane-flying. The planes seem so small, and appeared to be maneuvering so slowly that I could not credit the camera with having given me a true representation. But on watching this exhibition at first hand I realized that I was getting the same effect as is given by the film reproduction. And I mention this for whatever satisfaction it may afford those who have been able to witness such a performance only through motion-pictures.

For half an hour the two planes played about, a mile or more above us, Lieutenant Logan going through all the evolutions: the loop, the nose-dive, the tail-spin, the falling-leaf, and the other stunts, the names of which have become so familiar. And all that time Tommy's pilot was going through nearly as many evolutions in order that the other plane might be kept within the range of Tommy's camera.

Tommy was rather reticent about commenting on his experiences in being tossed about up among the clouds. As a veteran of this new craft it had all become rather commonplace to him.

Was he ever scared? Well, no-o-o-o-o-o.

"You see, you've got too much to do just minding your camera to bother about getting scared," he explained, after some moments of deep thought. "You just leave all that to the other fellow."

"But how does it seem—doesn't it give you some awful throbs in the pit of your stomach?"

"We-e-e-l-l, yes, maybe, at first; not any more. I guess I'm sort of used to it. But I don't reckon any one could work a camera very well while he was being stunted if he wasn't used to it," he finally admitted.

"You really don't know which side up you are, do you, while the shake-up's going on?" I asked, continuing my probe.

Tommy thought again.

"N-o-o-o-o-o, I reckon you don't," he finally decided. After a few more moments of deep cogitation he suddenly looked up.

"I'll tell you how it is," he said in a tone of one who has at last solved a difficult problem. "Everything's sort of whirling all around and you don't try specially to figure out your bearings, 'cause there's no use. Well, all at once you come out of some sort of a flip-flop, and the earth and sky have quit chasing each other around and you feel as if you're sittin' pretty again. Naturally you look down and you think it's funny you can't see land—only blue sky. Then you look up, and right up above you there's the earth. And for a minute you wonder what the earth's doing up there where it oughtn't to be. Then about that time your feet seem to sort of rise up from the floor and you have to push to put 'em down again. And then you know you're upside down. That's all I know about it. You get used to it, tho."

Mr. Gatchell experienced some of the "milder" sensations of flying when the picture called "Uncle Sam's Air Service" was taken directly over the Capitol. He describes them:

Both of our air-reporters worked on this assignment, and it was my lot to fly again with "Bee." Once more I found myself perched in the rear cockpit of a bomber. But this time it was a Martin, and the Martin, tho a huge machine, is capable of more dexterous handling than a Handley-Page.

We were flying around and around over the city, a couple of hundred feet above the flock of planes that were playing about beneath us, when, glancing up toward the forward cockpits, I saw Cohen lean over the side and then turn and nudge the pilot, giving him some directions by gesture. The pilot responded by a quick turn of the steering-wheel, which on that type of plane resembles the steering-wheel of an automobile.

Then the horizon suddenly began to tip up.

Up, up, up it tipped until we were banked at about 60 degrees, as one of the photographs shows. At the same time the earth, which shows very little motion when you are riding on a level, started to spin round and round, faster and faster, and as the tipping and spinning increased, the earth and sky commenced chasing each other around in a dizzy helter-skelter. There were moments in which I would catch my breath, thinking that we were turning completely over. Then we would seem to be righting again, and at last these curious sensations subsided and we were flying level once more. I learned afterward that we had been spiraling down in a maneuver that was to bring us near the planes below us. During the maneuver a "still" camera man who was riding with me caught a snap of the men in the front cockpits at a moment when "Bee" turned to see how we were standing it. But when we repeated the harrowing evolution a few minutes later he kept his camera going, and the result was a strange bit of photography, which, when I saw it on the screen later on, took me back and gave me a thrill all over again. I can't say that I like being spiraled in a bomber. I kept thinking, "If we ever go into a sideslip, how will this big freight car ever right herself?" It was really quite a relief when we landed.

Whether that was a hazardous bit of maneuvering or not I can not say. I do not suppose that our pilot had any idea other than that we would get down all right, but after we landed, and I had crawled out through the door in the bottom of the fuselage, I heard a mechanician who had been watching the flight from the ground call up to "Bee" as he was unfastening his camera: "Say, did you guys know just how close you were to passing through the pearly gates on that trip?"

Captain Felix Steinle, however, who had had charge of the flying part of the undertaking, shrugged his shoulders and said that almost anything could be done with a Martin. But as we walked off the field, and he informed the ambulance crew that they were through for the day, he added: "Well, I'm glad we got through without an accident. We've been pretty lucky."

ARMY CHAPLAINS WANT A SEPARATE ORGANIZATION

"IT was morale that won the war," according to Charles Stelzle, who is the author of a recently published pamphlet on the need of a chaplain's corps in the new American Army, "and the finest morale has its foundations in religion. The American Army won largely because it was engaged in a great crusade —a fight for democracy, a fight for the very men against whom it was fighting." The chaplains of the Army were largely responsible for the creation of this kind of morale, Mr. Stelzle believes. There were more than two thousand chaplains, and it was their task to weld together the regiments they served by serving every man as an individual.

The chaplain was looked upon as a sort of "handy" man, and many tasks that were outside his field of experience were set him. But he performed all with unfailing cheerfulness. Mr. Stelzle argues that the Army chaplain, if he would be successful, must be a superspecialist, for he has to do with the spiritual side of the soldier. He urges that a separate corps should be established, presenting the following arguments:

> The War Department does not permit a veterinarian to direct an engineering squad, nor does it allow an infantry officer to tell the doctor what to prescribe.
>
> Why should a line officer continue to direct the work of a chaplain?
>
> In the medical corps, the dentists are set to filling teeth and not to loading cannon.
>
> Why should chaplains be appointed to operate post-exchanges—a matter requiring business training—instead of being left free to do their work as religious leaders?
>
> The task of the chaplain is as delicate a piece of work as is being done in the Army in any of its departments, because it deals principally with human nature—with the souls of men.
>
> During the war the morale of the men was fairly well sustained because they were engaged in almost superhuman tasks—but when the war ended, there was a distinct slump in this respect because the men no longer had the inspiration and enthusiasm which came from the performing of heroic tasks.
>
> No government ever took such pains to see that the physical and moral welfare of its soldiers and sailors was safeguarded as did our own in the world-war.
>
> It welcomed the aid of the great outside welfare and religious organizations in cheering and comforting its men.
>
> For the future, however, the War Department seems to have adopted a new policy. Apparently all welfare work is to be distinctly an army affair.
>
> Obviously this will mean that the chaplains will have even more responsibility.

A bill, known as the Capper bill, for the establishment of a chaplains' corps, is

The A B C

A

ADDING

"Getting the total" is a great figure need of business, consuming annually millions—if not billions—of dollars' worth of time. Whatever the total—cash sales, charge sales, bank deposits, ledger-columns, payrolls—there is a Burroughs Machine built for the job—including a long line of machines known primarily as Adding and Listing Machines.

B

BOOK-KEEPING

Another group of figure operations is that in which many figure facts are recorded on the same sheet—as a ledger page, statement, stock record, control sheet, etc. Here again for any business, for any department, for any bookkeeping need there is a Burroughs Bookkeeping Machine, which prints the items and computes and prints the balance.

C

CALCU-LATING

Any Burroughs Machine can be used for multiplication and division as well as addition and subtraction; but the Burroughs Calculator is the one speediest and most convenient machine for all those figure operations requiring no listing of items—such as checking an invoice, etc.

OF BUSINESS

in which American business men have invested $75,000,000 in the last five years

This confidence of business in the Burroughs product is based in part on the mechanical excellence of that product. In part, also, it is based on the world-wide service which goes with that product—which follows it in every daily operation and assures its continued efficiency.

But these two factors are not alone sufficient to account for an investment on the part of American business men of $75,000,000 in Burroughs equipment during the past five years. The real reason lies in the fact that Burroughs serves a vital and ever present business need.

It is today an accepted fact that accurate accounting is in very truth the "A B C of Business"—the corner stone of credit, of administration, of satisfactory profits.

The relation of Burroughs to this great need of the business world is fundamental. William Seward Burroughs was not simply the inventor of the Adding Machine; he was the founder of a business institution to serve business, by mastering every figure operation in all business transactions and finding the most convenient, speedy and economical way of reducing every one of those operations to automatic accuracy.

This covers the needs of the biggest as well as the smallest business. It embraces all three great groups of figure operations: Adding, Bookkeeping and Calculating. The retailer's sales slip, the bank's ledger, the merchant's statement and the jobber's invoice are alike provided for.

It is a fundamental Burroughs service and obligation to business to devise newer and better machinery, to help the user keep that machinery in effective operation, and to engineer it properly into the peculiar needs of each business.

No lesser ideal could give this result—to devise, recommend, and install the one machine best suited to a single business requirement, needs the broadest experience with all business operations, and with all figuring machine principles.

With that background every new idea is tested in the cold light of practical experience. It must prove that it will work and stand up to the job before it can join the ever-increasing company of Burroughs machines. It is precisely because Burroughs has been dealing with all figure problems for thirty years, that its judgment in regard to any one specific problem is reliable.

Adding—Bookkeeping—Calculating Machines

Burroughs

Carey

ROOFINGS

and

ASBESTOS
MICAKOTE Roofing
ASPHALT
Carey fibre Coating
MAGNESIA
85% MAGNESIA
STEAM
BOILER

—the complete line of building materials made from Asphalt, Asbestos, Magnesia and felt.

DURING the 46 years that Carey Asphalt Asbestos Roofings have been making a success Carey scientists have developed scores of other superior building materials from the three wonderful minerals for which Carey Company is headquarters.

From **Asphalt**—Nature's best water-proofing mineral—they have developed Carey Built-up Roofings, Roll Roofings, Asfaltslate Shingles, Elastite Paving Joint, Ezola Floor Covering, Damp-proofing Compound, Water-proof Wallboard, Roofing Paints and Pitch.

From **Asbestos**—the fire-proof, fibrous rock—they have developed fire-prevention and insulating materials, Pipe and Boiler Coverings, Asbestos Fabrics, Papers, Boards, Roofings and Roof Coating.

From **Magnesia**—they have developed Carey 85% Magnesia Pipe and Boiler Coverings and Cements.

The Philip Carey Company, through dealers and through the distributors listed, can supply you with the BEST of everything that builders need—and that can be made from—

ASPHALT
ASBESTOS
MAGNESIA

THE PHILIP CAREY COMPANY

501-521 Wayne Avenue Lockland, Cincinnati, Ohio

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Atlanta	R. O. Campbell Coal Co.
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Birmingham	Young & Vann Supply Co.
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Chattanooga	James Supply Co.
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Dallas	Pittsburgh Plate Glass Co.
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Minneapolis	W. S. Nott Co.
Miami, Fla.	Cameron & Barkley Co.
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Nashville	T. L. Herbert & Sons
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New Orleans	Woodward, Wight & Co., Ltd.
New York	Robert A. Keasbey Co.
New York (Export)	The Kelric Co.
New York	The Philip Carey Co.
Omaha	National Supply Co.
Philadelphia	American Insulation Co.
Pittsburgh	American Insulation Co.
Pittsburgh	The Philip Carey Co.
Portland, Oregon	Pacific Asbestos & Supply Co.
St. Louis	The Philip Carey Co.
Salt Lake City	Galigher Mach'ry Co.
San Antonio	Pittsburgh Plate Glass Co.
San Francisco	Western Asbestos Magnesia Co.
Seattle	Savage, Scofield Co.
Spokane	Nott-Atwater Co.
Tacoma	Savage, Scofield Co.
Tampa	Cameron & Barkley Co.
Toledo	The Carey Co.
Toronto	The Philip Carey Co.
Vancouver	Taylor Engineering Co., Ltd.
Washington	Asbestos Covering Co.
Winnipeg	Building Products & Coal Co., Ltd.
Wheeling	The Philip Carey Co.

PERSONAL GLIMPSES
Continued

now in Congress. It has the indorsement of the leading national religious bodies. We are told that—

> The corps will provide what is needed so much among the chaplains—organization.
>
> This is just plain business sense—to say nothing about efficiency. If the bill becomes a law, each chaplain will have the benefit of centralized control and coordination.
>
> In the selection of the chaplains, personality must count very largely, and those who will be authorized to select chaplains understand what are the essentials for success more than a regimental officer or a civil-service examiner possibly can.
>
> Of course the rules laid down for the selection of chaplains will be rigid and explicit and the examinations will be standardized and based upon sound principles.
>
> The chaplains of the corps will be called together for the discussion of the best methods of work.
>
> There will be developed among them an *esprit de corps* which has never before existed among the chaplains in the Army.
>
> A chaplains' corps would provide proper assignment of chaplains with regard to the predominant religion of the regiment and other units.
>
> If this were the case, it would not happen that a Protestant chaplain would be assigned to a regiment with only a handful of Protestants, or a Jewish chaplain to a unit in which there were practically none of his faith. Under the old system, situations such as these could easily occur.
>
> A chaplains' corps would provide for the proper training of men entering the service in a school having the indorsement of leaders of religious life in America.
>
> A chaplains' corps would bring about the development of the chaplains' service so as to prevent overlapping and working at cross-purposes and would see to it that there were no neglected areas—that every man in the Army had the benefit of the chaplains' service.
>
> In the Canadian and in the British service, with a smaller permanent chaplain personnel than now authorized by law for our Army, the Chaplain-General has the rank of major-general. There were, during the war, in the British service, one chaplain-general with the rank of major-general; one assistant chaplain-general with the rank of major-general; one principal chaplain-general with the rank of major-general, and six principal chaplains with the rank of brigadier-general.
>
> If the United States Army is to develop and hold the type of men needed for the chaplaincy in the new army, it will be necessary to establish suitable grades.
>
> According to the bill now before Congress, chaplains shall have rank, pay, and allowances as follows: "Five per cent. shall have the rank, pay, and allowances of colonel; 10 per cent., the rank, pay, and allowances of lieutenant-colonel; 15 per cent., the rank, pay, and allowances of major; 45 per cent., the rank, pay, and allowances of captain; and 25 per cent., the rank, pay, and allowances of first-lieutenant.

Intellectual Stratagem.—"Aren't you preparing some big speeches?"

"No," answered Senator Sorghum. "I am going to keep silence for a while and give my constituents the impression that I am thinking hard."—*Washington Star.*

THE FRENCH IN AMERICA

(*Continued from page 43*)

fifty-six pulpwood organizations in Canada in 1917, twenty-five were in the province of Quebec, which produces one-half of the total of 2,000,000 cords.

Lumber cut by provinces, 1917:

Ontario	$25,000,000
British Columbia	22,000,000
Quebec	17,000,000

Timber-lands owned by provinces:

Quebec	9,863,000 acres
Ontario	3,917,000 "
New Brunswick	2,708,000 "
British Columbia	1,549,000 "

The French-Canadian is an expert river-driver.

In manufacturing they have not made a great deal of progress, altho they have done well in dairy production, such as the making of butter and cheese. The cotton industry of Canada is also located largely in the French districts, and most of the employees are French-Canadians. The directors of the cotton industry and of other large industries in the province of Quebec are for the most part English-speaking Canadians, altho the French-Canadian does well in finance and wholesaling. Some of the finest financiers of Montreal have been French-Canadians. In politics and law they have had many stars. Indeed, some of the most celebrated English-speaking orators in Canada have been men whose mother-tongue was French. Their colleges adhere more closely to the old classical education than do the English-Canadian colleges. The French-Canadian, says a sympathetic and competent Canadian authority, is an industrious and productive citizen. He, perhaps, lacks the desire and the ability to take part in the great industrial undertakings, but he has other qualities which more than make up or that lack.

CLEAN COAL—We have only to examine the reports of the Geological Survey to see why coal comes to us with varying percentages of ash and other impurities. Says *Power Plant Engineering* (Chicago):

"Here we will find veins of excellent coal streaked with layers, ranging in thickness from the fraction of an inch to several inches, of bone, slate, shale, or sulfur compounds. These impurities result in ash or clinker in the boiler furnace and when the percentage of sulfur is excessive it causes rapid corrosion of all metals coming in contact with the gases of combustion. While the engineer has always recognized the value of clean coal for his furnaces, it was not until the coal shortage of two years ago that he appreciated the condition in which the coal comes to the mouth of the mine. At that time, many carloads of coal were rejected because of the great percentage of slate and stone which it contained. While the average percentage of unavoidable ash in bituminous coal mined throughout the country is in the neighborhood of ten, many complaints were investigated where the amount of ash was above 30 per cent. These conditions brought about a more thorough study of coal-washing and cleansing processes and to-day the largest and best-equipped mines are prepared to deliver cleaner and better coal than ever before. The concentrating table method of purification is among the latest developments in the field of coal-mining, altho it has been used extensively in metal mining."

"Descending the broad hall stair,
Grave Alice, and laughing Allegra,
And Edith with golden hair."
—THE CHILDREN'S HOUR

Where but in a home of your own will you find opportunity for whole-souled, free, joyous family life? Where else can your children grow up amid the surroundings that develop character and love of family? Nowhere! So then, own your own home and own it now.

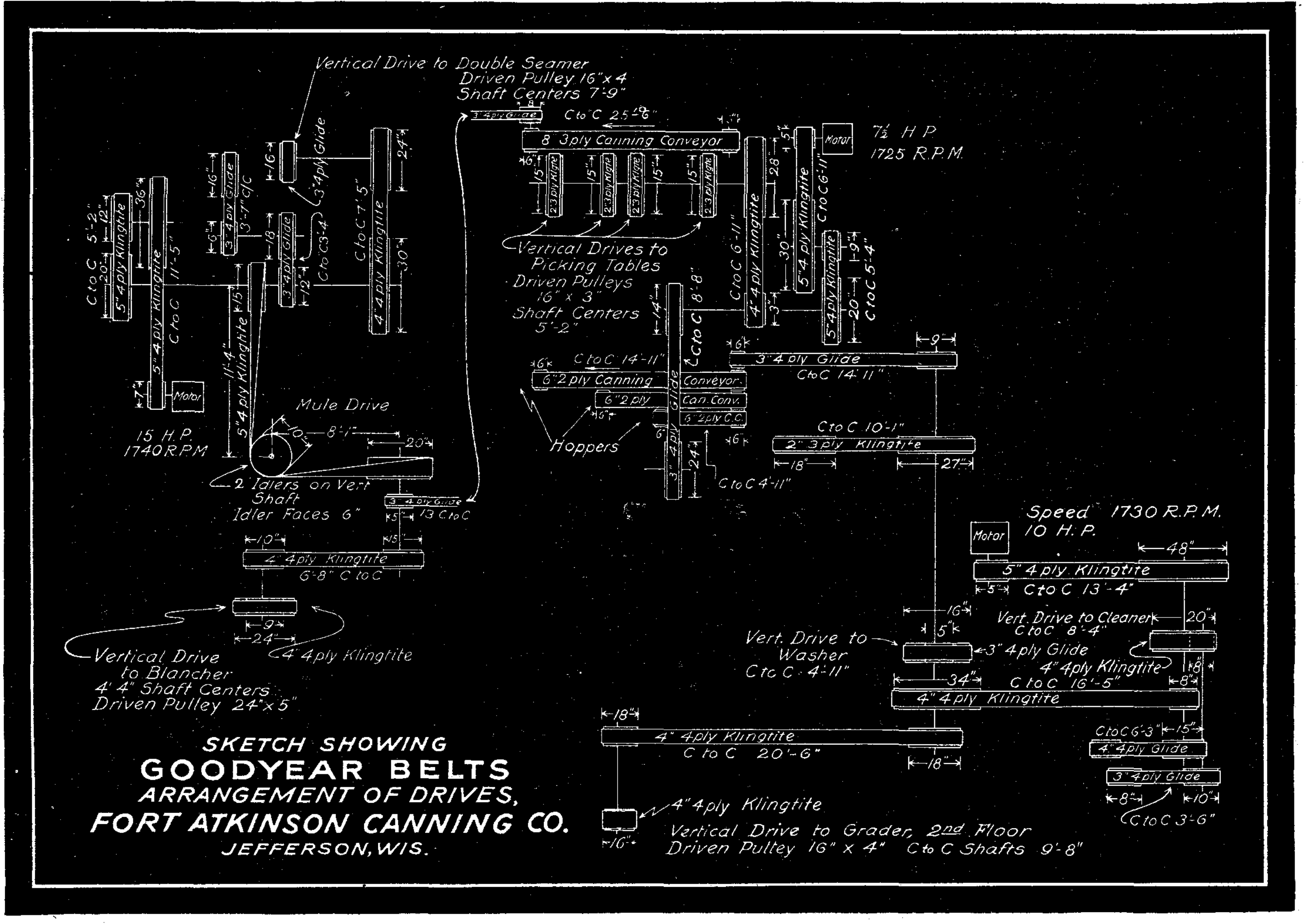
Arkansas
Soft Pine

puts that home within your reach at minimum cost. It is the ideal economic building material. As interior trim it is perfect for stains or white enamel. Our book tells why and shows eighteen fascinating home designs that will delight your eye. Write.

Arkansas Soft Pine Is Trade Marked and Sold East of the Rockies

Arkansas Soft Pine Bureau
221 Boyle Building
Little Rock, Arkansas

ARKANSAS SOFT PINE TRADE MARK REGISTERED


Vertical Drive to Double Seamer
Driven Pulley 16" x 4
Shaft Centers 7'-9"
8" 3ply Canning Conveyor
7½ H.P.
1725 R.P.M.
Motor
Vertical Drives to Picking Tables
Driven Pulleys 16" x 3"
Shaft Centers 5'-2"
15 H.P.
1740 R.P.M.
Motor
Mule Drive
2 Idlers on Vert Shaft
Idler Faces 6"
4" 4ply Klingtite
6'-8" C to C
Vertical Drive to Blancher
4'-4" Shaft Centers
Driven Pulley 24"x5"
4" 4ply Klingtite
Hoppers
6" 2ply Canning
Conveyor
3" 4ply Glide
C to C 14'-11"
2" 3ply Klingtite
C to C 10'-1"
C to C 4'-11"
Speed 1730 R.P.M.
10 H.P.
Motor
5" 4ply Klingtite
C to C 13'-4"
Vert. Drive to Cleaner
C to C 8'-4"
Vert. Drive to Washer
C to C 4'-11"
3" 4ply Glide
4" 4ply Klingtite
C to C 16'-5"
4" 4ply Klingtite
C to C 20'-6"
4" 4ply Glide
3" 4ply Glide
C to C 6'-3"
C to C 3'-6"
4" 4ply Klingtite
Vertical Drive to Grader, 2nd Floor
Driven Pulley 16" x 4" C to C Shafts 9'-8"

SKETCH SHOWING
GOODYEAR BELTS
ARRANGEMENT OF DRIVES,
FORT ATKINSON CANNING CO.
JEFFERSON, WIS.

An Idea, Our Good Name—and the G.T.M.

They had never used a Goodyear Belt. Their experience with the belting they had in their parent plant had been generally satisfactory. But the Fort Atkinson Canning Company did know Goodyear reputation for quality—knew it by the willing testimony and the demonstrated experience of other concerns the country over who were reporting notable successes with Goodyear Belts on every kind and condition of drive.

And the plant analysis idea proposed by the G.T.M.—Goodyear Technical Man—struck them as the logical way to insure the right belt for every duty. They had opportunity to test the principle of it thoroughly in a study of their new plant's belting requirements. They had the G.T.M. make the study.

So they specified 100% Goodyear equipment—transmission belts, conveyor belts, steam hose, water hose—for their new cannery at Jefferson, Wis., all on the basis of the G. T. M.'s plant analysis, and their confidence in Goodyear products.

The Jefferson plant is an efficient linking of different transmissions and conveyors. No one type belt, however well adapted to one form of duty, could be depended on to fulfill with equal capacity all these varied demands. An expert analysis that insured the full effectiveness of every drive in relation to the entire unit appealed to the superintendent as the only right solution of the power problem.

Note the belts specified to their particular uses: for the light drives, where the conditions are small pulleys run at high speed and uniform load, Goodyear Glides; for general transmission and moderately heavy duty, Goodyear Klingtite has been used. Width, plies and type are specified to the service required. The very natures of the Goodyear Belts employed meet the peculiarities of the situation. For instance, the belt on the canning conveyor, due to its particular construction of cover, fabric and friction, insures against the action of acids encountered in the raw material it carries.

The unfailing performance of these Goodyear Belts substantiates the plant analysis method of applying belts to the specific service. Their freedom from belt troubles—no slipping, no stretching to an appreciable amount, which usually causes an interruption in production in order to "cut out" and take up the slack—is their own best service assurance.

Both Goodyear analysis and Goodyear belts are at your service. The G. T. M.'s expert study of a single drive or a complete plant installation is without obligation on your part. For further information about the Goodyear plan of plant analysis and the G. T. M., write to the Mechanical Goods Dept. of the Goodyear Tire & Rubber Co., Akron, Ohio.

BELTING · PACKING HOSE · VALVES
GOODYEAR

SCIENCE AND INVENTION

Continued

EXPLOSIVE DYES

THE manufacture of dyes is not by any means devoid of danger. The workman employed in a dye-plant may be burned by acids or alkalies, or poisoned or blinded by fumes. But the greatest hazard of the dyestuff industry is risk from explosion. Dr. I. C. Cone, of the National Anilin and Chemical Company, Buffalo, writing in *Chemical and Metallurgical Engineering* (New York, January 7), tells us that his own plant from this cause alone suffered three fatalities in 1918. These occurred in one instance where a quantity of explosive dye ignited and killed three men. Records of the industry, during the last two or three years especially, have been full, he says, of reports of similar accidents. Practically every dyestuff company in the country has had more or less experience of the kind. This is a hazard which chemists and safety men must inform themselves about and guard against more carefully. He goes on:

"The greatest risks of explosions about dyestuff - plants are three in number: Explosions of dyes and intermediates, explosions of pressure-kettles, and explosions of vapors mixed with air.

"The type of explosion which has caused our greatest loss is the explosion of dyes themselves. We have been prone to forget that dyes are organic compounds, some of them closely related to explosives. We have not accustomed ourselves to consider each new dye as a possible explosive, but have gone ahead, powdering and grinding our products in blissful ignorance until an accident has called our attention to the danger. A dye widely used for khaki shades on wool during the war was known as chrome yellow. This was made in very large quantities, dried, ground, packed, and shipped. It is doubtful if a single producer of this dye tested this material for its explosive properties before he began to produce it on a commercial scale, yet, as I can quickly demonstrate to you, by igniting a small portion of the dye its quick-burning properties render it more dangerous than many of our violent explosives. It is further doubtful if a single producer of this dye escaped the penalties of his failure to test the product. One large producer informed me that the total profits from his company's manufacture of this dye had been lost through disastrous fires and accidents. The same thing is true of another widely used chrome dye, which is frequently known as metachrome brown. This product has been the cause of at least three disastrous explosions in different companies to my own knowledge. With these experiences in mind we shall be very remiss in our duties if we do not examine every new dye for its explosive properties. . . . . .

"Even after the dye is given a clean bill of health by the chemist because of its composition, it would not be remiss to have the dye tested before drying and powdering. This is a service which the dye-producers owe to their consumers as well as to their employees, for many dyes are mixed in mills and exposed to conditions which might produce explosions."

With this particular danger eliminated, the next explosion risk which the chemical industry faces is that due to processes carried on under high pressure. Chemistry at high pressure, we are told, has only begun its development in this country. Processes normally considered impossible are gradually being carried out under conditions of high pressure and with the growth of American chemical industry, reactions of this type will be more and more largely introduced into our manufacturing plants. To quote further:

"As they are introduced, the explosion hazard will become greater and greater, and the safety men must cooperate closely with the technical engineers to see that every possible precaution is taken against disastrous results to our workmen and to our plants. It has been rumored that the very important intermediate, paranitranilin, has been made commercially by only one process in this country because another process, which offers many advantages, has a great explosion risk connected with it owing to very high pressure. If the American dyestuff industry is to be permanently successful, it must not permit itself to be restrained because of high-pressure explosion risks. The control of this risk is primarily, of course, a technical engineering problem, but after the engineering layout is complete the safety man will find his opportunity to provide such appliances and such conditions as will give minimum destruction to life and property in case the engineering equipment ever fails.

"The risks of explosion due to the ignition of mixtures and combustible vapors with air are already thoroughly appreciated by the technical and safety men. I only wish to call attention to the fundamental principles which must be followed in safety precautions to avoid explosions of this kind. While every effort to keep flames away from inflammable mixtures is commendable, these precautions alone will never entirely prevent ignition of explosive mixtures. Every effort must be concentrated on preventing the formation of such mixtures. Many disastrous explosions have occurred where every precaution has been taken to avoid the presence of all sources of fire. It is never possible to do away entirely with the chance formation of either frictional or electrical sparks. These are apt to be formed at most unexpected times, and at these times, if an explosive mixture of air and vapor is present, an unexplained disaster results. One of the most disastrous explosions I have ever witnessed, in which a large and well-equipped plant was completely destroyed, was due to a chance frictional spark.

"As an illustration of the extreme difficulty of preventing ignition by chance sparks I will cite a case of my own observation where a large amount of toluene was stored in a glass enameled steel tank. It never occurred to the operators that a glass enameled steel tank is an ideal electrical condenser. The contents of the tank were not grounded in any way. A leak of toluene from the bottom valve soaked the floor under the tank; the workman, in attempting to repair this leak, made connection between the contents of the tank and the floor through a wire in his hand; the toluene on the floor immediately became ignited. Quick-witted workmen threw a few shovels of snow, which happened to be convenient, over the burning toluene and succeeded in smothering the flame before it ignited the tank.

"For handling problems of this kind the safety engineer must have a very clear appreciation of the fundamental principles of both physics and chemistry, and must further work in close touch with the technical men of his own organization. By such close cooperation and careful study of each accident that occurs it will be gradually possible to eliminate the explosion risks of our industry."

TYPEWRITTEN MAGAZINES

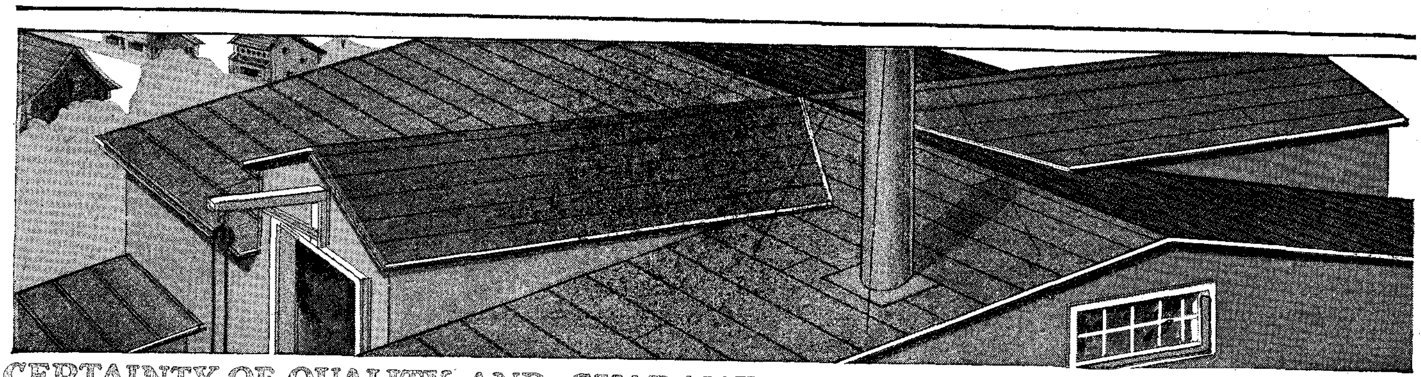
THE use of typewriting in getting out this magazine during the printers' strike has occasioned wide comment and discussion, and has induced M. W. McConkey to look up in the records of the United States Patent Office similar devices that have been patented in the past. It is interesting to note, Mr. McConkey tells us, in *The Journal of the Patent Office Society* (Washington), that the plan is a reversion to the original idea from which modern type-casting machinery, such as the linotype, has developed. Ottmar Mergenthaler, it appears, was first interested in type-casting by being employed by a customer who wished to do away with typesetting, by typewriting a print to be reproduced by lithography. Mergenthaler worked along this line for a while, then changing to machines which would impress type in a plastic matrix for casting stereotype plates. Both these processes being found impracticable, in 1883 he conceived the idea of casting the type line by line. We read:

"In view of the many suggestions now being put forth for improvements on the achievement of THE LITERARY DIGEST by 'justifying' the lines (making the margins come out even), attention might also be called to a patent granted March 19, 1878, to C. T. Moore for a method of justifying typewriting. Mr. Moore proposed to type the matter to be justified on a long continuous strip of paper. From this the words were to be cut out and pasted on a backing sheet, in such manner as to provide even margins at both ends of the lines. This sheet was to be used as a transfer-sheet, the printing to be transferred to a lithographic stone and reproduced by well-known lithographic methods. . . . . . .

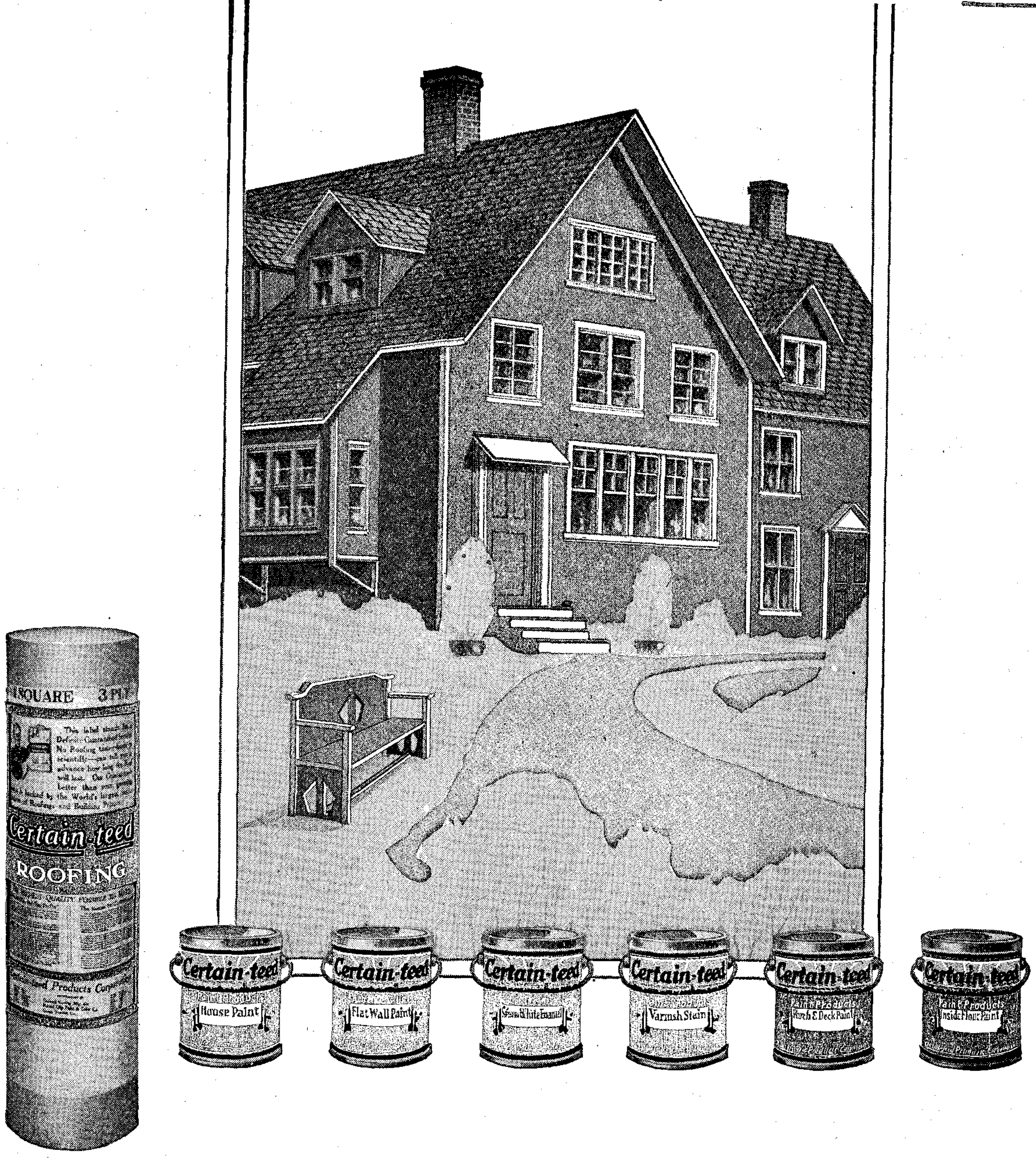
"Among the 'phototypographs' (machines which produce a printed surface by photographing character by character or line by line) are found several patents showing attempts at justification of the lines. A patent granted December 18, 1877, to Drummond attained this object by printing on rubber strips, which were stretched in a frame so that the lines of printing on them were justified, whereupon the whole was photographed. Patent to Wetmore, granted May 30, 1905, attained this object by shortening the longer lines the desired amount, by tilting them with reference to the lens of a camera, the titled line appearing, when photographed, shorter by the desired amount."

Other mechanical methods attack the problem from different angles: copying over the unjustified matter, at the same time manually spacing the words enough to

The area of roofs yearly covered with Certain-teed has for a long time been far greater than the area covered by any other kind of prepared roofing in this country. Its labor and money saving qualities appeal especially this year when roofing less modern than Certain-teed is unusually dear. Certain-teed is made in rolls—the staple gray kind and the mineral-surfaced green and red—and also in mineral-surfaced shingles for residences.



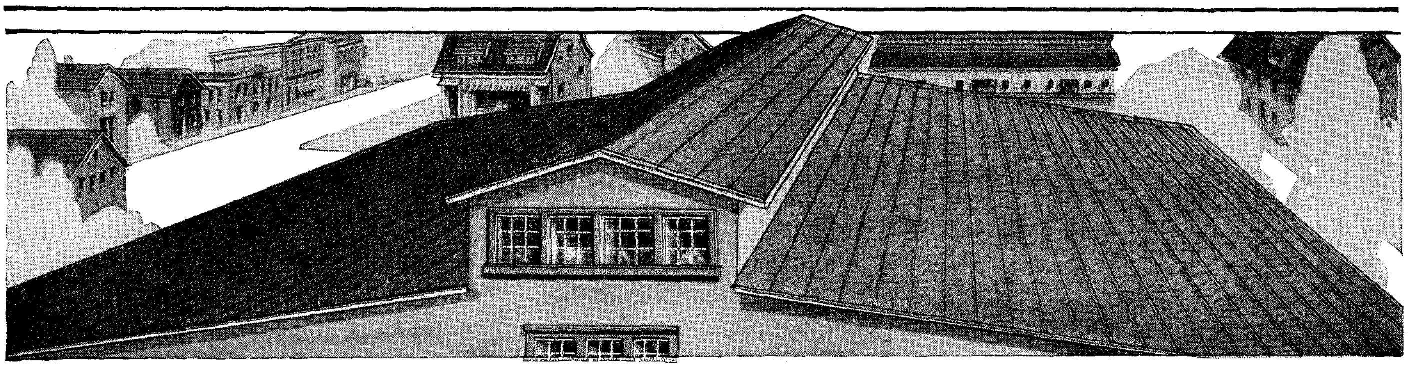
CERTAINTY OF QUALITY AND GUARANTEED SATISFACTION - CERTAIN-TEED


1 SQUARE 3 PLY
Certain-teed
ROOFING
Certain-teed House Paint
Certain-teed Flat Wall Paint
Certain-teed Snow White Enamel
Certain-teed Varnish Stain
Certain-teed Paint Products Porch & Deck Paint
Certain-teed Paint Products Inside Floor Paint

PAINT · VARNISH · ROOFING & RELATED · BUILDING · PRODUCTS

There are special Certain-teed Paints and Varnishes for every need. All are sold on the Certain-teed fair-price policy which means savings for you. You pay only a fair price based on the cost of producing each particular kind and shade, rather than to pay the same price for all colors, which is the way paints are usually sold.

Certain-teed



CERTAINTY OF QUALITY AND GUARANTEED SATISFACTION - CERTAIN-TEED

THE price of roofing to the user, generally speaking, is lower today than it was years ago. In no case has the price to the ultimate buyer increased proportionately with the increased cost of labor and materials.

Prices to the consumer have been held down, in the face of rising costs, because Certain-teed standardized methods have materially lowered the cost of distribution.

The extensive system of Certain-teed warehouses and hundreds of distributing centers save much in freight and handling charges.

Even more is saved by the Certain-teed policy of doing away with the special selling monopolies that for many years increased costs and stifled competition in the paint and roofing industries.

All these Certain-teed savings have been systematically reflected in Certain-teed price reductions to the consumer.

The result is a very moderate cost for a decidedly superior product.

Certain-teed Products Corporation

General Offices, Saint Louis
Offices and Warehouses in Principal Cities

SQUARE
Certain-teed
ROOFING

Certain-teed

Certain-teed
HOUSE PAINT
448

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"Defies Time and the Elements"

CHASE DREDNAUT Motor Topping

affords protection at all times.

When purchasing your new car or re-topping, give heed to its top. Specify *Chase Drednaut* and have no regrets.

Though costly, Drednaut is not an extravagance, owing to the sterling qualities of durability and permanent rich appearance.

L. C. CHASE & CO.
BOSTON NEW YORK
DETROIT CHICAGO
SAN FRANCISCO

SCIENCE AND INVENTION

Continued

make up the shortage in the line; saving up the line in what may be called a 'mechanical memory,' which afterward controls key-striking mechanism to produce the matter in justified lines; and setting up lines of type, justifying by wedge-spacers or otherwise, and then printing, line by line. To quote the writer further:

"The most interesting of these mechanical devices are the ones which have a key-operating mechanism which is set from a keyboard for a whole line, and then operate the key-striking and carriage-spacing mechanism in such manner as to produce a line of the standard length—what might almost be said to be a mechanical memory. In June, 1889, Isaac Risley filed an application which . . . used a perforated paper strip as the controlling member for the key-operating mechanism. As the operator struck the keys of the machine, a typewritten copy of the matter was produced in the usual way, for use as a proof, while at the same time holes were punched in a paper ribbon, like the roll of a player-piano, to cover the letters to be printed, the spaces between the words, and also the width of each character. This machine printed the type of variable widths, like printer's type (the 'i' and the 'l' being narrower than the 'm,' instead of the same width as in typewriter type), and these variable widths were added together by the machine to obtain the shortage of the line, which was divided equally among the spaces between the words. The paper ribbon passed further and operated the key-striking and carriage-spacing mechanism, the keys being struck successively, as on a typewriter, but impressing the characters in a sheet of plastic matrix material which was used as a mold to produce a stereotype plate. Patent granted May 30, 1899, to Isaac Risley and V. F. Lake, for an improvement on this device, utilized for the controlling member a wheel, in which were frictionally held a number of pins, corresponding to the characters and their widths, and the spaces between words, in the same way as the holes in the paper ribbon. The operator worked continuously, after setting the machine, as the latter automatically closed the lines, justified them, and arranged the matter in a justified column. A number of other patents along this line . . . make up a highly ingenious group of machines which do not seem to have been successful commercially. One great difficulty with these machines seems to have been that they proposed to impress characters in a plastic matrix, for use in casting a stereotype plate, and great difficulty was found in preventing the impression of each character from marring the impressions already made. Perhaps as typewriting-machines, to produce justified typewriting for future issues of The Literary Digest, they might be found more practical.

"The machines which are intended to print justified matter line by line are very largely modifications of the various well-known forms of type-casting apparatus, such as the linotype, to permit the machine to print the line of characters instead of casting a line of type from them. . . . No reason is apparent why such machines should not be entirely successful, and for the purpose of producing copy to be reproduced by photochemical methods they ought to do better work than the usual typewriting-machines, since they are adapted to make very black characters, using printer's ink instead of a ribbon.

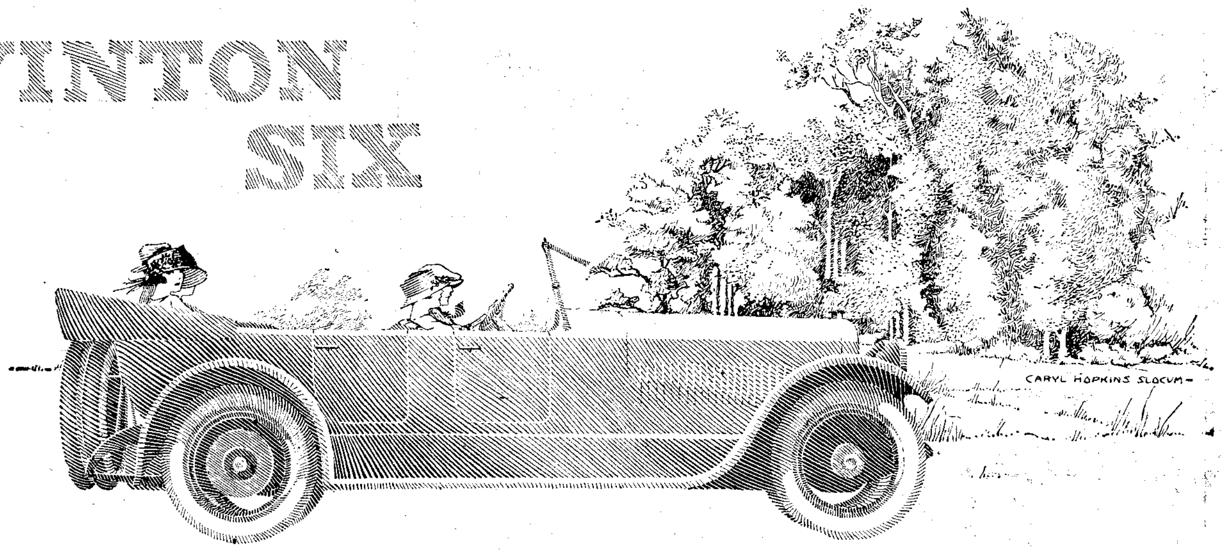
"Whether the photochemical methods will supplant type-casting to any extent is a question which will interest all who have to do with printing. As an emergency measure, they have already proved practical, but considerations of speed, ease of composition of the pages, cost, and quality of product would seem to argue against their general adoption at present. The Literary Digest reports that plates for printing can be made in nine hours; this would seem to bar the process entirely from the newspaper field, where speed is such a prime requirement. As to composition, it is apparent that it is much simpler and easier to arrange pages from the type-bars produced by type-casting machinery than the scissors-and-paste method of arranging typewritten matter on a card-board backing ready to be photographed. Typists for the new processes will probably cost nearly if not quite as much as linotype operators, and the subsequent processes of preparing printing-plates from the type-metal product are much simpler, and for the present, at least, cheaper, than the corresponding photochemical processes necessary with the typewritten product. Nevertheless, the field offers possibilities; the great difficulty experienced heretofore in attempting to make stereotype matrices by such methods is obviated by the use of the camera; and no insuperable difficulties are seen in looking forward to the final success of the methods as an auxiliary to type-casting—altho it is not believed that they will supplant the older method."

FUEL-WASTE AND CONSERVATION

HOW can we talk of conserving fuel when at least half of the total available heat in our fuels is allowed to go to waste? Much of this waste takes place, we are told by an editorial writer in *The Electrical Review* (Chicago, January 3), in the transformation of heat to electrical energy, and *vice versa*. Instead of selling electricity for heating purposes, the author says, its producers should sell the heat directly, avoiding the waste of the double transformation, and incidentally abating smoke and increasing their own profits. Until this is done he refuses to believe that anything like real conservation is possible at central stations. Conservation, he asserts, is at best a relative term, especially when applied to fuel. Central stations are helping to conserve fuel in one sense, perhaps, because they are able to manufacture electricity more efficiently than isolated plants. Upon a heat-unit basis, however, their operation is not efficient, and fuel-conservation in this connection becomes a very relative, even an ironical, expression. He goes on:

"To permit production of kilowatt-hours with a lower consumption of heat-units, central stations are going to higher steam-pressures and are operating at vacua within a fraction of an inch of absolute. And the need for higher thermodynamic efficiency is bringing about many changes and refinements. Meanwhile the method of producing kilowatt-hours continues in the same old way.

WINTON SIX



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SET your expectations high before you ride in it, because this surprising new Winton Six is no ordinary car. Neither is it a car with a trick motor that demonstrates well and then loses the knack.

Its amazing performances are real and inbred. They are the fruit of twelve years of devotion to the one task of perfecting the famous Winton six-cylinder motor.

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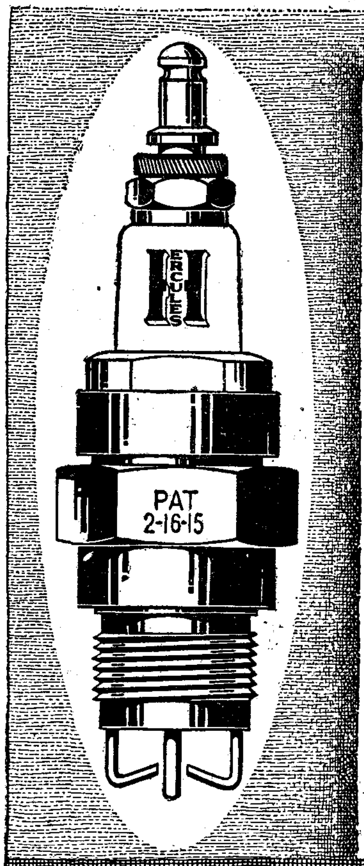

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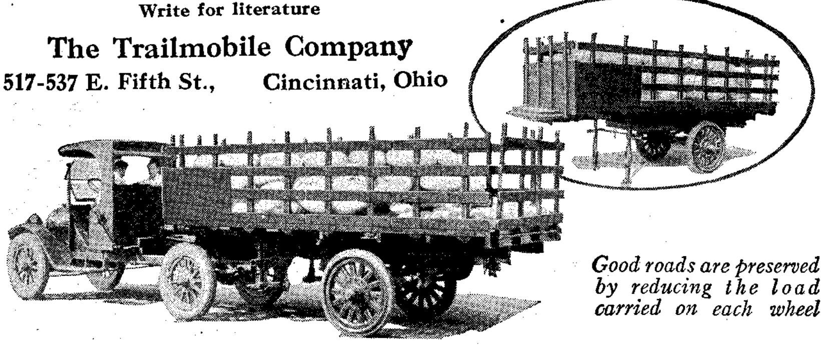


Good roads are preserved by reducing the load carried on each wheel

SCIENCE AND INVENTION
Continued

"The conversion of energy from chemical energy to electrical energy is highest when allowing the full expansion or heat extraction from the steam. This means maintenance of high vacuum. Unfortunately, high vacuum means that a large portion of the heat is lost to energy transfer from thermal to electrical energy, and this heat is usually lost to usefulness in that it is allowed to pass into the river or to the sewer unutilized. About half the total available heat is lost in this way. Under such conditions—operating conditions representing the acme of present-day central-station operation—what does the term 'fuel conservation' mean?

"If instead of going into the sewer or the river the heat-units that can not now be changed from thermal to electrical energy could be utilized, the total amount of heat utilized immediately becomes many times greater, more efficient, based on ratio of heat available to heat used. When this condition obtains, fuel conservation becomes more of a fact and less of a fiction, surely!

"So long as half and more of the total heat is allowed to go to waste, central stations can not claim to be *conserving* fuel. Fuel will only be conserved, and the statement is relative only in any case, when there is very much less discrepancy between the heat produced and the heat used. In producing the kilowatt-hour, the large loss or waste occurs in converting the energy from one form to another, heat energy to electrical energy. By supplying heat as heat, as well as in selling electricity, kilowatt-hours, the central stations could make fuel conservation a fact, increase their revenue, abate smoke, and do untold good for themselves and the people in other ways. . . . . .

"The question of district-heating is not a new one, of course. It is an old one. But it is a matter that has assumed a new aspect, and a very important aspect, of late. Conditions have changed radically during the last couple of years, and these circumstances that combined to the disadvantage of district-heating ten years and more ago are now combined to its immense advantage.

"District-heating should be a business, not a hobby. It is a solution to special problems; not a panacea to all central-station problems. For district-heating to pay, district-heating must first of all be feasible. It must, secondly, be scientifically carried on, which means proper construction and operating methods must be adopted, and equitable rates for service must be charged. In the past, too, many, and sometimes all, of these requirements for success were lacking and failure resulted. . . . . .

"Existing conditions place an entirely new complexion upon district-heating. The saying that the looker-on sees most of the game is often true and one can not help but feel that in striving to obtain a low water-rate—minimum pounds of coal or steam or water per kilowatt-hour—the central-station fraternity have rather forgotten that there is need in the world for heat as well as electricity. Only by supplying both can the central stations make fuel conservation an accomplished fact; and only by so doing will they be able to come up to the sacred responsibility that is theirs. And there is no time like the present."

SCIENCE AND INVENTION

Continued

EYE-STRAIN AT THE MOVIES

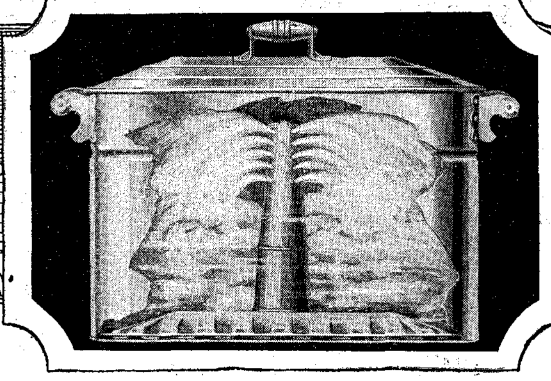
THE London County Council is preparing to take action in this matter, we learn from an editorial note in *The Lancet* (London). The Illuminating Engineering Society have been asked for advice, and that body propose to appoint a committee of investigation which may include members of the Council of British Ophthalmologists and of the Physiological Society, besides representatives of the cinematograph industry. The subject is not new, the writer reminds us. In 1917 Dr. J. Kerr read a communication before the Illuminating Engineering Society dealing with the effect upon the eyes of varying degrees of brightness and contrast, and made recommendations for the improvement of performances from this point of view. The matter, he goes on to say, is one of considerable urgency, and it behooves medical men especially to have clear ideas on the subject. We read:

"There is no evidence that organic injury to the visual apparatus can be directly produced by these displays—at any rate, when the eyes are healthy. On the other hand, it is a matter of common knowledge that they frequently induce a high degree of nervous fatigue. This fatigue probably arises mainly from the following causes:

"1. *Glare*—By glare is meant the uncomfortable sensation caused by a brightly illuminated surface when the eyes are in a state of dark adaptation. It is contributed to largely by the excessive darkness of the auditorium, which produces an excessive contrast with a highly illuminated screen. Especially trying are some of the program slides shown between the films, in which the contrast between the bright lettering and the dark background is far too abrupt. In this connection the lighting arrangements, not only of the auditorium but of the passages, require attention.

"2. *Flicker*—This is the unpleasant sensation caused by the changes in the moving films when these are not sufficiently rapid to produce the effect of continuous motion. The result is the necessity for continual rapid readjustment of the whole visual mechanism on the part of the spectator. In this respect much depends upon the quality of the film. Old or damaged films are especially injurious, causing flashes of light, which are extremely trying.

"3. A third cause of fatigue results from the heavy demands made upon the lateral muscles of the eye and the nervous mechanism by which these are coordinated when any swiftly moving object is fixt by a stationary observer, or when an observer who is himself swiftly moving, as in an express-train, fixes a comparatively near object from the carriage window. In either case, the nearer the object to the observer and the swifter the motion, the more work is thrown upon the lateral eye muscles. In many films—those representing processions, for instance—the motion is unnaturally accelerated to prevent boredom on the part of the spectator. The spectator, however, if he is sitting at all near the front, becomes unpleasantly



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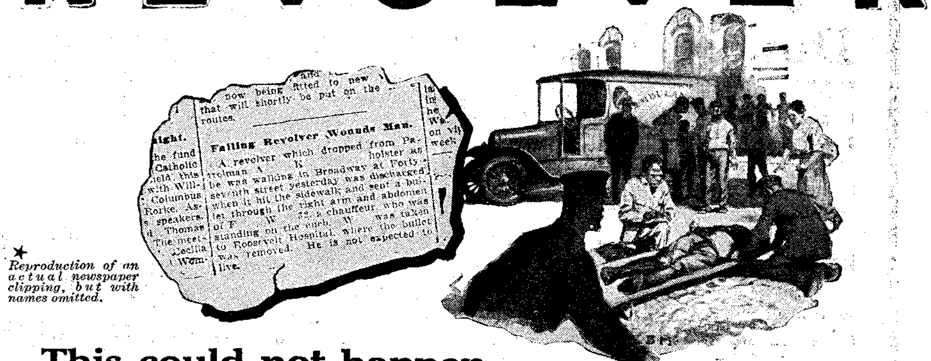

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now being fitted to new
that will shortly be put on the
routes.

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A revolver which dropped from Patrolman A. K. holster as he was walking in Broadway at Forty-seventh street yesterday was discharged when it hit the sidewalk and sent a bullet through the right arm and abdomen of F. W., 32, a chauffeur, who was standing on the curb. W. was taken to Roosevelt Hospital, where the bullet was removed. He is not expected to live.

★ *Reproduction of an actual newspaper clipping, but with names omitted.*

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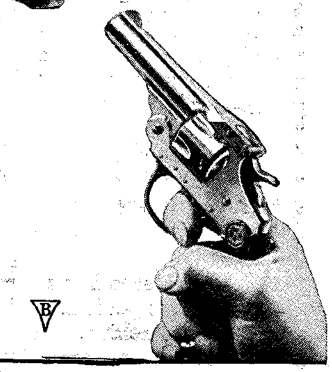

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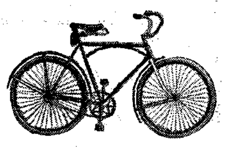


conscious of the effort thrown upon his eye muscles.

"It is especially in children that the bad effects of cinema-fatigue from all these causes are apt to show themselves. Defective ventilation, when it exists, is an additional and potent cause, and in some halls the irritating effect of an atmosphere thick with tobacco-smoke upon the conjunctiva is an additional drawback. The displays are generally far too long, and even for adults it is more trying to concentrate the attention on any object when the retina is in a state of dark adaptation than when it is adapted for light. In all these respects there is great need for a proper standard for cinema displays to be laid down by public authority. It is to be hoped that the matter will not be lost sight of by the London County Council until this has been done, and that their example will be generally followed."

CURVED SCREENS FOR THE MOVIES

CONCAVE screens for the exhibition of moving pictures, invented recently in France, are said to give much more satisfactory results than the ordinary flat screen. A reporter of *The Evening Sun* (New York) gives the following account of a private test of the new screen before a group of about one hundred scientists, motion-picture experts, and newspaper men. The concave surface is said to eliminate the eye-strain and distortion, especially for those that sit near the picture or at the extreme sides of the theater auditorium. We read:

"The projection was made at the Rivoli Theater and was under the supervision of the inventor, Prof. J. Louis Pech, head of the department of medicine at the University of Montpelier, France, and a physicist of note.

"Scenes from 'Everywoman' were flashed by the same projection machine that is used on the flat screen and at the same rate of speed and with the same lighting effects. The screen has no chemical secrets. It is merely a matter of construction. Professor Pech says it takes into account the shape of the image of the eye.

"The consensus of opinion seemed to be that the concave screen marked a worthwhile advance in the motion-picture industry. Prof. John J. Furia, head of the department of physics of New York University, watched the projection into the screen from every angle and was satisfied that the invention would be of great benefit.

"Dr. Furia, who is also president of the Industrial Research and Engineering Association and has done considerable research and experimenting in natural color and stereoscopic motion-pictures, said after the exhibition:

"'This new screen has a curvature such that every point on it is equidistant from the projection-machine. In the flat screen no two parts are equidistant from the projection-machine and therefore distortion is produced.

"'The curvature principle is the only scientific principle upon which a screen should be built, because of the fact that the image given by the projection-machine is not flat, but has a curvature similar to that in the curved screen.

"'The results from the new screen may be summarized as follows:

"'There is correct focus at corners of the screen which is not secured by the flat screen.

"'There is elimination of curvature distortion. These two improvements are especially noticeable from points of the theater close-up and off to the sides. The distortion gives fatigue to the eye and elimination of distortion and improper focus, which is accomplished by the new screen, prevents this.

"'It is claimed by Professor Pech that approaching figures in the center of his screen appear slightly stereoscopic, whereas in the flat screen we do not get this. Incidentally that is probably the chief cause of fatigue in the flat screen. In my opinion while the fatigue is eliminated, the stereoscopic effect (the so-called third dimension in pictures) is so slight compared to that obtained from artistic lighting that it is hardly worth taking into consideration. The shorter the throw from the projection-machine to the screen the greater is the superiority of this new contrivance over the old flat screen, so that small theaters probably would profit more than the larger.'"

REFRIGERATION BY JOLTING

A REVOLUTION in the cooling of freight-cars and other vehicles carrying perishable commodities has come about by the recent introduction of a new system of cooling by automatic circulation of brine throughout the carrier. In an article contributed to *The Scientific American* (New York), Robert H. Moulton tells us that the value of the system has been so well demonstrated by tests that one of the large Chicago packing-houses has adopted it as their standard system of transit refrigeration. In the new plan, the principle of the thermos-bottle has been applied to the automatic brine-circulation system by heavily insulating its vital parts from the rest of the vehicle. Writes Mr. Moulton:

"Briefly, the system consists of a tank, or two tanks connected by a series of pipes running along the top of the car, the pipes only being exposed. In each tank, which is filled with a mixture of ice and salt to form brine, is a partition running lengthwise of the car. In one of these partitions are four check-valves opening to the right, and in the other four similar valves opening to the left. The result is that when the car in transit is swayed or jolted over to one side, the brine sloshes through to that side; when it is jolted the other way, the valves on the first side close while those on the opposite side open and the brine is forced through the pipes on that side. Thus there is constant circulation of the brine so long as the car is in motion and this circulation absorbs the heat-units from both the car and the load. From 3,000 to 4,000 pounds of crusht ice and salt are required to charge an ordinary car, the proportion of the two materials depending upon the temperature desired in the vehicle, which, in turn, depends upon the nature of the load being carried and the outside temperature. When the car is not in motion, and is held for short periods, the power of the expanding brine is utilized for its circulation. As the heat units are absorbed the temperature of the brine exposed in the pipes is raised and causes expansion. Consequently the circulation is constant whether the car is in motion or not. For example, a car of frozen beef from Chicago to New York, June 25 to 29, stood fifty-three hours after arrival, with no change in the temperature at the top of the car and a rise of only one degree on the floor.

"The construction of the automatic brine circulation system is such that it is not limited to refrigerator-cars, but may be applied to any moving vehicle such as trucks, boats, etc. Already the system has been installed by a Chicago ice-cream manufacturing concern in a number of their large electric delivery-trucks. In these trucks there is but one tank with pipes, through which the brine circulates and then returns to the tank. The swaying and jolting of the trucks have the same effect of circulating the brine as in the case of railroad-cars.

"Not the least remarkable feature of refrigerator-cars equipped with this system is the fact that they may be changed from refrigerator- to heater-cars, or *vice versa*, without in any way exposing the lading. The two tanks are connected by pipes running down the end walls and along the floor, under the floor-racks. When it is desired to heat the car, the overhead pipes are shut off. Water and salt are put into the tanks and the solution heated by steam from a locomotive or any available steam line to such degree as the character of the load and outside temperature conditions may require. The swaying of the moving car then circulates the warm brine through the pipes under the load in the same manner that the cold brine circulates through the upper pipes."

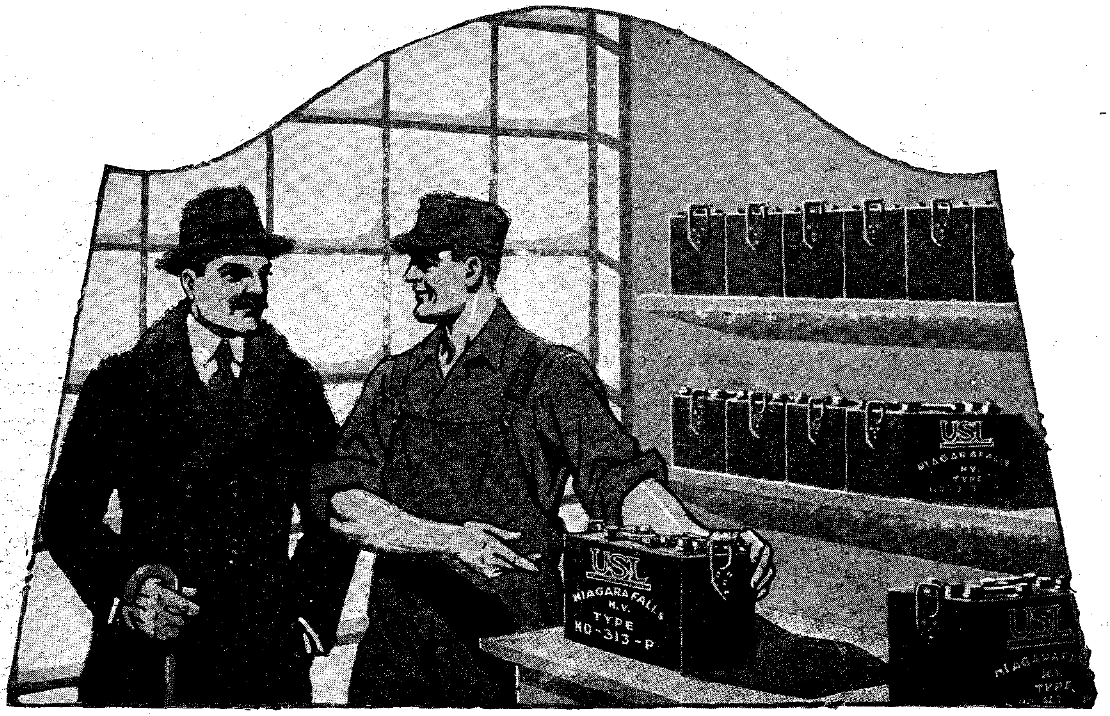
FIRES CAUSED BY CARELESS USE OF ELECTRIC PRESSING-IRONS

THE careless use of electric pressing-irons used in private apartments, hotels, tailor-shops, and other places is causing many fires and costing underwriting companies a great deal of money, according to J. C. Forsyth, chief inspector of the Electrical Department of the New York Board of Fire Underwriters. He states that in 1919 there were thirty-two electric pressing-iron fires, involving a loss of $151,368, of which amount $110,868 is directly chargeable to electric irons in use without the knowledge of the Board's Electrical Department. The pressing-irons responsible for the damage indicted are of standard makes and not larger than the five-pound type. The Chief Inspector's report, giving a list of losses over $2,000 for 1919, appears in *The Eastern Underwriter* (New York):

"1. Used in loft building, total of five irons, all supplied with indicating switches, separable plug, and pilot lights. The electrician had finished this installation the day of the fire and it was not turned over to the ironers. Electrician did not file application covering the above work until after the fire. One iron was left directly on bench and no attention was paid to the pilot lamp. Loss, $2,840.

"2. Used in men's-furnishing store and iron secured current supply from existing drop-light. Iron was used to press neckties. Iron was left on bench and two sprinkler heads operated. Loss, $3,598.

"3. Used in bedroom of furnished-room



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That's the *old* method of distribution to the public. Regardless of the maker's best intent, the newest possible battery you buy the *old* way, may actually start to work for you with an eighth—possibly a half or more—of its life done for. Yet *you* pay for this lost life—this wasted serviceability.

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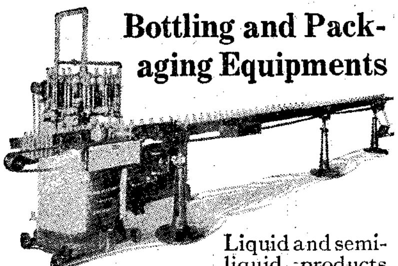

Liquid and semi-liquid products of all kinds are packaged quickly and economically with Kiefer Automatic Equipment.

Complete outfits for filtering, pumping, bottling and packaging Proprietary Medicines, Pharmaceutical Preparations, Extracts, Perfumes, Jelly, Jams, Mustard, Salad Dressing, Syrups, Lard, Lard Substitutes, Paints, Varnishes, Ointments, Cold Cream, Oils, Condensed Milk, Soups, etc., are supplied.

We can show you the quickest, least expensive ways of bottling and packaging the above products. Machines that suit your product, containers, capacity, and plant conditions, and which give you the desired output at lowest cost, are furnished.

Our engineers with years of experience work with you in planning and installing the most economical and productive equipment and system.

We make filling machines, filters of all kinds for every purpose, jar and bottle rinsers, belt and roller conveyors, bronze rotary and centrifugal pumps, etc.

Write for Catalog D.

THE KARL KIEFER MACHINE CO.
CINCINNATI, U. S. A.

SCIENCE AND INVENTION

Continued

house. Woman of house left iron on dresser. Stand not in evidence. Current supply from existing fixture socket. Loss, $5,300.

"4. Used in a loft-building, current supply from existing outlet and by lamp-cord tied to pipes. Position of stand could not be determined. Two sprinkler-heads operated. Loss, $5,800.

"5. Used in a loft-building and has the distinction of occurring during working hours. Two irons, each supplied with indicating switches, separable plugs, and pilot lights. Appearance indicates that iron on a stand had been shoved along bench until it was in contact with inflammable dress-goods. Loss, $10,000.

"6. Used in bedroom of apartment-house. In service all night long, as an effort was made by tenant to locate a strange odor when tenant went to bed. Following morning upon opening door of bedroom a small flame was noticed on the ironing-board, and the person finding this left all doors open to the street and the flame followed to street-hallway. Loss, $3,457.

"7. Used in a loft-building. Several sprinkler-heads operated. Eight irons provided with indicating switches, separable plugs, and pilot-lights. Iron clearly not on stand. Loss, $30,000.

"8. Used in a loft-building. Four irons, each provided with indicating switch, separable plugs and pilot-lights. Four sprinkler-heads operated. Position of iron could not be determined. Loss, $40,500.

"9. Used in a dressmaking establishment. Current supply from existing socket, and position of iron could not be determined. Loss, $5,960."

THE BIGGEST OF TELESCOPES—At the last meeting of the American Astronomical Society Professor Hale reported some preliminary results of comparative tests of the new 100-inch reflector at Mt. Wilson and the 60-inch reflector at the same observatory. Says *The Scientific American* (New York):

"The superiority of the new instrument is well shown by the experience of Dr. Merrill in spectographic studies of stars of Class Md., of which about two hundred brighter than the ninth magnitude at maximum are known in the latitudes accessible to the Mt. Wilson instruments. For most of these stars exposures of five hours or more are required with the 60-inch to yield a measurable absorption spectrum. In fact, so few can be effectively observed for both dark and bright lines that it would hardly be advisable to enter upon an extensive study of these objects with the smaller telescope. The greater light-gathering power of the 100-inch, says Professor Hale, makes such a study perfectly feasible. Good photographs of the absorption spectra of some of them have been obtained with exposures of two hours or less. Dr. Shapley, in studying star clusters with the 100-inch, finds a gain of about one magnitude. Photographs of the moon have not yet been made under ideal conditions with the new telescope, but Professor Hale states that the extraordinary minute structure of lunar details that he has observed visually with this instrument indicate that it is exceptionally well adapted for lunar photography."

HOW THE MOSQUITO KNOCKED OUT GREECE AND ROME

THE decadence of Greek civilization and the fall of the Roman Empire were caused, not by the Macedonian conquest or the irruption of barbaric hordes, but by the mosquito. This is the conclusion drawn by authorities who have subjected both cases to scrupulous investigation, and there appears to be no escape from it, according to an editorial writer on the staff of *Modern Medicine* (Chicago). Particular reference is made to a recent memoir by W. H. S. Jones, entitled "Malaria, a Neglected Factor in the History of Greece and Rome." The Macedonian conquest would have been inadequate, we are told, to destroy Greek civilization, and the irruption of the barbarians into the Roman Empire would not have occurred if the ground had not been prepared; in each case, by a sapping of the resistance of the people by generations of malarial infection. We read:

"For an examination of the data relating to the source of the original infection and to the gradual spreading of malaria, our readers are referred to the fascinating work named. Our task is to draw practical lessons of present application. The most obvious of these lessons has already been learned in part; that is, that it behooves us to arrest the progress of the identical enemy which caused the downfall of Rome, and to oust him from his strongholds. We must undo, in short, a part of the work of destruction and restore prosperity to great areas of fertile country depopulated by the alliance of anopheles and plasmodium.

"The lesson has been most thoroughly taken to heart in tropical and subtropical regions, where Caucasians from non-malarial countries have come into contact with the destructive and degenerative effect of malarial infection. Next in order are such districts as the lower Mississippi Valley, where the exigencies of increased production and the growing recognition of the economic losses entailed by neglect of malaria have combined with the general awakening of the public conscience in health matters to set in motion, first experimentation with, and then wide application of measures for malaria control.

"The demonstrated efficiency of these measures and the economic gains resulting from their application render certain their generalization at an early date throughout the malarial districts of this country.

"The tropical and subtropical countries and the United States may, therefore, be safely considered as well on their way to freedom from malaria, with more or less speed; but the countries referred to in the commencement of this article, regions formerly the home of the brilliant Greek and the solid Roman civilizations, are equally capable of regeneration. In Italy this work has already been seriously commenced, while in Greece proper much has been done. It may, therefore, be assumed that the swamps of Macedonia, due largely to deforestation, will be taken in hand.

"In Asia Minor great valleys lie in the grip of paludism. There is here an opportunity for a great work, at once philanthropic and profitable. Nor is the task a difficult one. Much of the country has now a sufficient population for cultivation on American principles, that is, looking to increase of productivity per man rather

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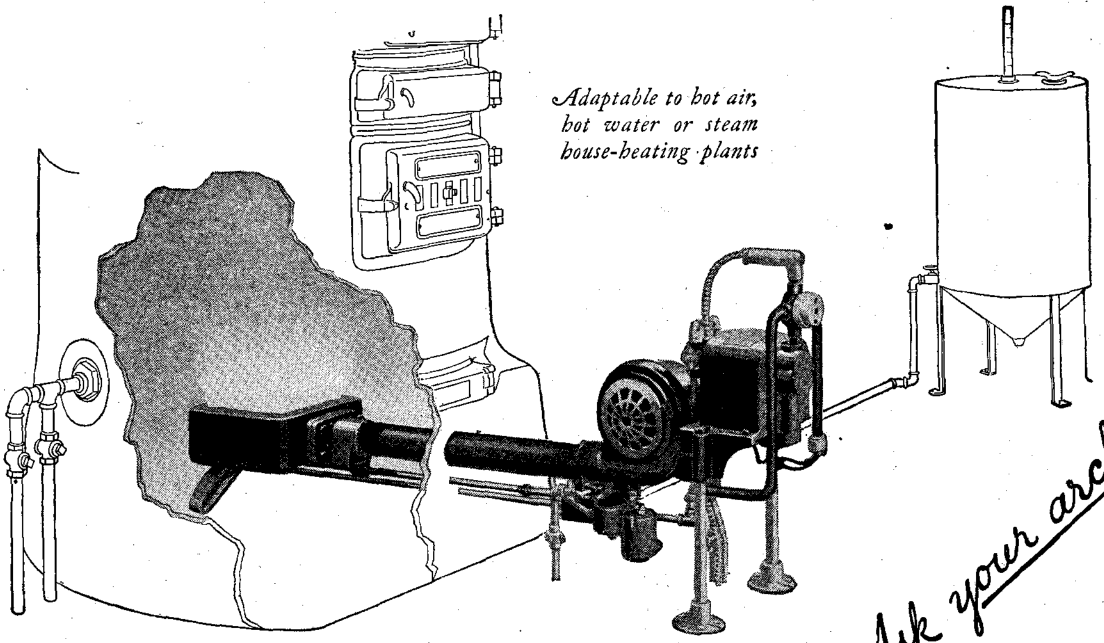

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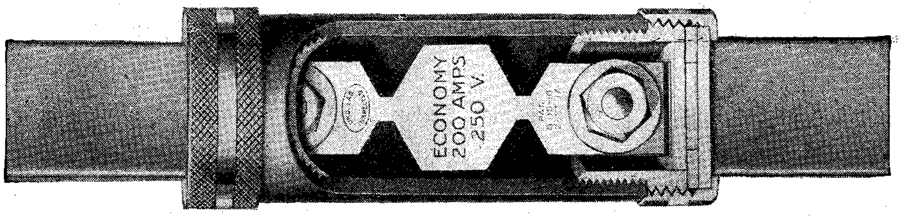

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Insist on buying renewable fuses which bear the label of the Underwriters' Laboratories. Make sure that the renewal links are stamped with the inspection symbol "Und. Lab. Inspected."

This is your protection—no matter what voltage or amperage—from 0 to 600 amperes in both 250 and 600 volts—be sure they carry these marks of distinction:

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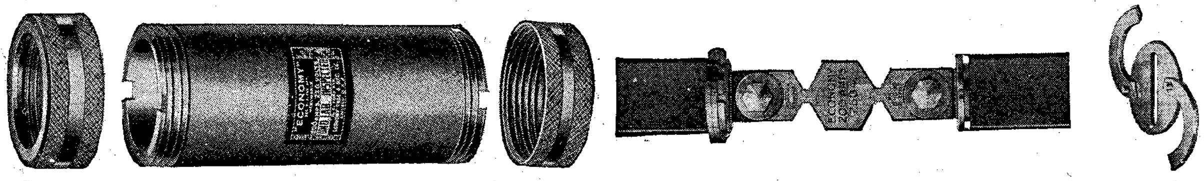
UND. LAB.
INSPECTED

It is an unnecessary expense to use an inner cartridge renewal unit in which the fusible strip of metal is surrounded with powdered filler. In that type of fuse a fiber casing, two metal caps and the powdered filler are discarded as waste every time a fuse of this type is removed. The Economy "Drop Out" Renewal Link, stamped with the "Approval" symbol, instantly restores a blown Economy Fuse to its original capacity. Nothing is replaced but the link—nothing discarded but the fuse metal.

Economy Renewable Fuses cut annual operating and maintenance costs 80% as compared with the use of one-time fuses. Economy "Drop Out" Renewal Links are inexpensive—a small supply always on hand makes possible greater efficiency and saves time and money wherever electrical circuits are used for power or light.



It is easier than ever to renew an Economy Fuse. Unlock the winged washer, replace the blown link, re-assemble the parts and press home the wings of the washer, securely locking the renewed fuse.

Economy Fuses—APPROVED IN ALL CAPACITIES, ferrule and knife blade types, are stocked and sold by the leading electrical jobbers and dealers of the United States and Canada. Insist on Economy Renewable Fuses.

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SCIENCE AND INVENTION

Continued

than per acre. This population is at present obliged to live in villages, in sites selected for their elevation, and, therefore, far from the best land; because during the malarial season it is impracticable to spend the night in the low fertile valleys. Moreover, the improvement of conditions would attract desirable peasants from other less productive but now healthier regions. No better contribution could be made to the vexed questions of the Near East than the amelioration of the cultivable area of Asia Minor."

FOOD FROM MICRO-AGRICULTURE

WILL the agriculture of the future be concerned, in its production of foods, with the microorganisms rather than with the plants of garden or field? A suggestion that this may be the case appears in a paper read before the Society of Chemical Industry in London by A. Chaston Chapman. From an abstract in *The Lancet* (London, November 29) we learn that recently discovered microorganisms have the power to build up fats and protein from the salts of ammonium in a few hours, thus developing food-products from inorganic material in far less time than it takes ordinary vegetation to do it. If some process of the kind can be carried on in a large way, we have the possibility of growing food rapidly and without any direct use of Mother Earth. This is, of course, not chemical synthesis; it is a vegetative process as truly as that of the garden, but under conditions that open up a vast field for speculation. Of Mr. Chapman's paper *The Lancet* says:

> "So important, he thought, were the developments in this field that he pleaded for the formation of a national Institute of Industrial Microbiology. When we consider, he said, the wonderful synthetic processes accomplished by the leaves of plants under the stimulus of light, the formation of starch or of protein in the growing plant, the conversion of carbohydrates into fat in the animal organism or by some of the microscopic fungi, or any of the numerous instances of enzyme action; and when we compare the ease and completeness with which these complex transformations are effected at ordinary temperatures with the clumsy and often wasteful syntheses of the organic laboratory, we must realize how far we are still from understanding Nature's methods, and how much we have to learn before we can hope to imitate them. He quoted the following remarkable instance, among many, of the powers of synthesis possest by microorganisms.
>
> "One of the professors of the Institut für Gärungsgewerbe in Berlin received in 1916 from a pupil stationed on the Eastern front a small specimen of a growth found on the stumps of certain trees in the district. After considerable investigation it was found that the growth contained an organism which exhibited some very interesting features. Thus, not only did it produce under certain conditions considerable proportions of fat, but it also had the property of building up crude protein from ammonium salts (without any form of organic nitrogen) in the presence of phosphoric acid and traces of compounds of potassium and magnesium. Since, as Mr. Chapman points out, ammonium salts could be obtained readily from the air, and inasmuch as the carbohydrates resulting from the acid hydrolysis of wood could be used as a source of carbon it was clear that this organism rendered it possible in the short space of thirty-six hours to build up fat and protein from such comparatively cheap raw materials as ammonium phosphate and the acid conversion products of sawdust.
>
> "It is some years ago now that the late Sir William Crookes urged the importance of manufacturing fertilizers from the air by the formation of nitric acid and the subsequent production of nitrate. That has been accomplished on a commercial scale, and a further step has been the synthetic formation of ammonia. If now our methods of cultivation, by the employment of microorganisms, prove feasible, the practise of agriculture may well lie in new directions, with the application of microbiological methods taking a prominent place. It is to be hoped, however, that such methods will not detract from the esthetic qualities of food, which are of well-known physiological importance."

DIAMONDS BY DIVING-BELL

DEEP in the Vaal River, in South Africa, are diamonds. To get them, we are told by the writer of an article in *The Engineering and Mining Journal* (New York), a device on the diving-bell principle is to be employed, having a tubular shaft and an air-lock. Giving as its authority *The South-African Mining and Engineering Journal*, the paper named above tells us that the device is the invention of Fabian M. Cox, and that it consists of two pontoons, rigidly connected by decks, between which a roomy caisson or diving-bell is sunk to the river-bed. A tubular shaft joins the caisson to a chamber above the water-level, and the whole is air-locked. To keep the caisson submerged, it is weighted with iron ballast, and the chamber above the water-level has a concentric tank filled with water, which can be adjusted to carry the necessary weight. We read:

> "Compress air is forced into the interior of the upper, or air-lock, chamber, the shaft and the bell, or caisson, and the river water being thus forced out below, it is possible to carry on digging and loading operations conveniently. The gravel is hoisted up the shaft and delivered into a chute which holds about a ton. When filled, it is discharged by a mechanism of double doors, which prevents the escape of compress air from the interior of the various caisson compartments. Safety is provided by means of the free communication of the bell with the upper or air-lock chamber through the shaft and ladderway and by an easily opened manhole above.
>
> "The following notes are taken from the provisional patent specification: The present invention has reference to caissons or diving-bells of the air-lock type, and in this instance is designed for the recovery of gold or precious stones from deep waters. The invention consists of providing a diving-bell having a tubular shaft and air-

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You will smoke a two-for-a-quarter cigar.

You have merely to write us to send you a box of cigars postpaid.

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Our cigars are made not only to sell, but to stay sold.

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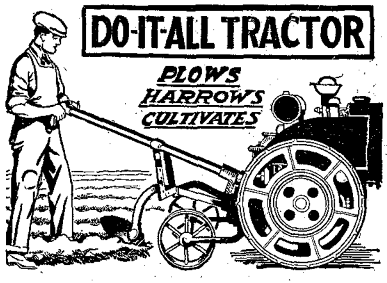

"DO-IT-ALL" TRACTORS PLOW ON THE LEVEL AND ARE LEVEL WHEN PLOWING

With the "DO-IT-ALL" tractor when one wheel is in the furrow the tractor is still level owing to adjustable bull wheels. It means that with this big improvement you can plow a straight furrow. It gives you better plowing and also gives you more power, as you get traction on both bull wheels on their entire face. In addition to this it increases the life of the tractor as each bull wheel does its share of carrying the load. It is not all carried on one bull wheel. The "DO-IT-ALL" weighs 900 pounds. It is 24 inches wide; it pulls a 10 inch plow. It has 6 H. P. on the belt; saws wood, pumps water; runs a 48 inch hay mower, a riding lawn mower, etc. There is a big money making opportunity for live wire dealers who have an organization to sell tractors. To the farmer it means a new world; it means doing the work in one-tenth the time and very much better; it means doing away with horses on the farm, for the "DO-IT-ALL" is what its name implies—a tractor that does everything on the farm. There is 25 years' engine manufacturing experience and 3 years' tractor experience behind this tractor and it is protected by basic patents. Ask for Catalog "7." It does not place you under obligation.

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U-All-No Mints are distinctively the ultra-fine candy confection for every home—daintily pure and temptingly wholesome. They have a smooth, creamy, snowy consistency—are fashioned into tiny sugary loaves and delicately flavored with crushed mint.

U-All-No Mints are neither over-rich nor over flavored—the ideal bon-bon for children.

Packaged in air-tight tins—several sizes. Twenty, twenty-five, fifty and seventy-five cents.

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SCIENCE AND INVENTION

Continued

lock with means of quick vertical adjustment through the agency of solid and liquid ballast and suitable guiding frame, and means of elevating minerals by (*a*) submerged pump, or (*b*) suitable hoist.

"The following is a description of apparatus constructed according to this invention, and in this instance it is presumed to be for purposes of diamond recovery: A metal cylinder or bell, having a dome roof which is surmounted with a tubular shaft in sections to suit the depth of water to be worked, is terminated by an air-lock chamber surrounded by a water-ballast tank. The dome roof of the bell is provided with means of securing and at will releasing a quantity of solid ballast. The tubular shaft is furnished with external runners, which engage in rollers or guides attached to the deck of a pontoon or raft, which carries an engine, air compressor, and centrifugal pump, and possibly a plant for the treatment of the gravel or material recovered. The air-lock chamber is provided with the usual manhole door and equalizing valve, together with an air-lock chute for discharging gravel, a special door closing the entrance to the tubular shaft, which latter is furnished with ladder-rungs and runners for skipway, operated by a hoist fixt in the air-lock. The base of the shaft where it enters the bell is fitted with an air-tight door, which may be used when it is necessary to lengthen the shaft. The bell is provided with collapsible seats attached to the wall for the accommodation of workers during lifting operations, and with a centrifugal pump or hydroejector having a flexible suction, by means of which the loosened gravel is deposited in the kibble or skip hoisted to the air-lock or elevated direct above water level to the deck of the pontoon.

"Sufficient solid ballast, partly to submerge the bell, is placed on the dome roof; water ballast is then pumped into the tank surrounding the air-lock in order to sink it and hold it securely on the river-bed or sea-bottom, and the gravel is elevated to the surface by pump or ejector direct, or hoisted to the air-lock and thence discharged through the air-lock chute projecting through the water-ballast tank."

GOVERNMENT PROTECTION AGAINST WOOD-ALCOHOL

WOOD-ALCOHOL is "alcohol" only in a chemical sense, being a member of the alcohol series of which various carbohydrates, including ordinary beeswax, are members. Nobody would think of making a drink out of beeswax, but if the word "alcohol" was part of its popular name there is no telling what people might do. Wood-alcohol is a poison, not alone in the sense in which we are assured that ordinary alcohol is "poisonous," but in the more active meaning attached to strychnin, arsenic, and carbolic acid. Says Charles Baskerville, chairman of the Committee on Occupational Diseases of the American Chemical Society, writing in *Chemical and Metallurgical Engineering* (New York, December 17):

"Unscrupulous persons have been selling mixtures containing wood-alcohol, as such,

SCIENCE AND INVENTION
Continued

or ethyl-alcohol denatured with wood-alcohol, as beverages. Cooperation of the chemical profession is sought to minimize this infraction of the law.

"During the penumbra of prohibition the word alcohol has exercised a weird and unfortunate influence, oftentimes through failure to appreciate the significance of such qualifying words as 'wood,' 'methyl,' and 'denatured.' Numerous cases of blindness and even death have resulted through ignorance or the infamy referred to. The Commissioner of Internal Revenue has as a result issued the following notice to collectors of internal revenue and revenue agents:

"'Reports recently received in the Bureau establish that completely denatured alcohol is being used extensively for bathing and rubbing purposes. This is contrary to the law and regulations, and such uses can not be tolerated, as the completely denatured alcohol is highly injurious to the skin and animal tissue.

"'It is also established that completely denatured alcohol is being sold by irresponsible dealers under such circumstances as to assure them that it is being used for beverage purposes. Where it is so used for any length of time blindness inevitably ensues, and the continued use can only result in death.

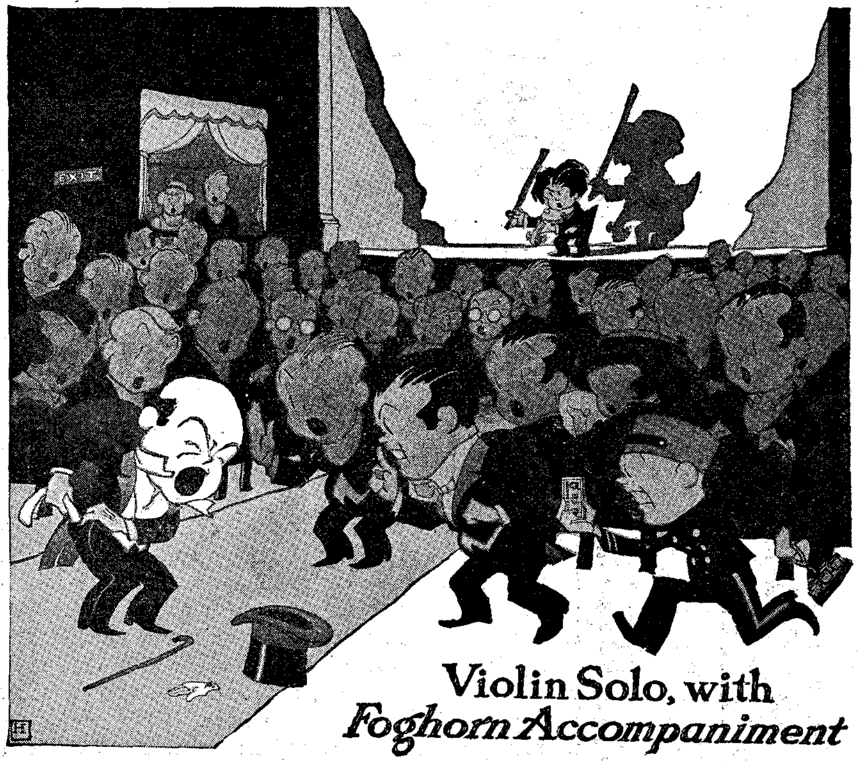
"'Collectors should use every means at their disposal to make known to the public the dangers of either external or internal uses of completely denatured alcohol. Wherever collectors or revenue agents in charge hear of a misuse of completely denatured alcohol, a most thorough and careful examination should be made immediately and all the facts fully reported to the Commissioner for the infliction upon the responsible parties of the ultimate penalties provided by law.

"'In view of the grave and extended abuses of the use of completely denatured alcohol reported, it is deemed necessary to print upon the labels affixt to wholesale and retail packages a further and more specific warning as to its use than is shown on the present required label.

"'In addition to the present matter on the labels there will be required on all new labels hereafter the printing, in large letters in red ink, under the skull and bones symbol, the word poison, and at the bottom of the label there will be printed the following statement:

"'Completely denatured alcohol is a violent poison. It can not be applied externally to human or animal tissue without seriously injurious results. It can not be taken internally without inducing blindness and general physical decay, ultimately resulting in death.'

"We chemists know that we daily handle poisons of various kinds, many far more dangerous than wood-alcohol, and there are comparatively few evil results from their handling and use. People do not drink them. The medical profession administers daily to patients many substances that are poisons except in the minute doses given. But in the case of alcohol, the 'kicker,' in drinks of quondam familiar kinds, means just that one desired fluid, hence attendant danger. We should do all in our power to protect those who use and some likely to abuse this important chemical and thus incidentally avoid lurid appeals with consequent hampering legislation."



Violin Solo, with
Foghorn Accompaniment

There's no duet on the programme, but the gentleman with the earnest cough is doing his best to add to the range of the concert. Trombones could do no more.

A public cougher is a public nuisance—and a public menace. He has no friends, and doesn't deserve any. For the cough betrays a thoughtless disregard for the health and convenience of others. Coughing is unnecessary. Smith Brothers S-B Cough Drops relieve it. They are a preventive of colds, as they will stop a cough and often keep it from developing into something worse.

Pure. No drugs. Just enough charcoal to sweeten the stomach.

One placed in the mouth at bedtime keeps the breathing passages open.

Drop that Cough
SMITH BROTHERS *of Poughkeepsie*
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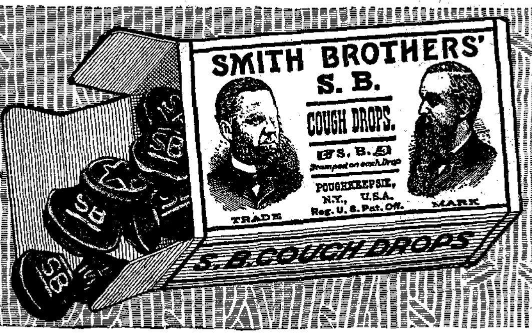

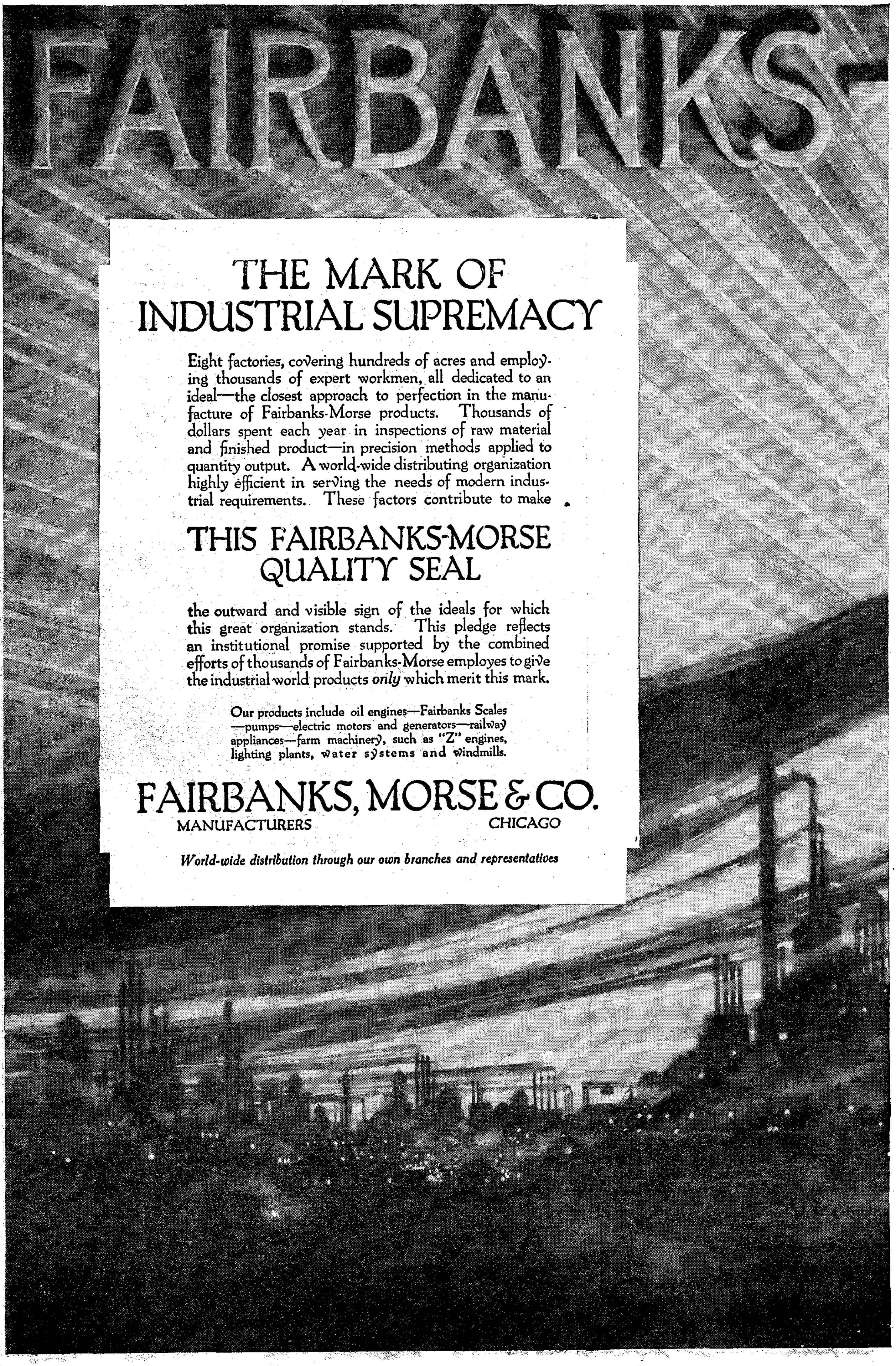

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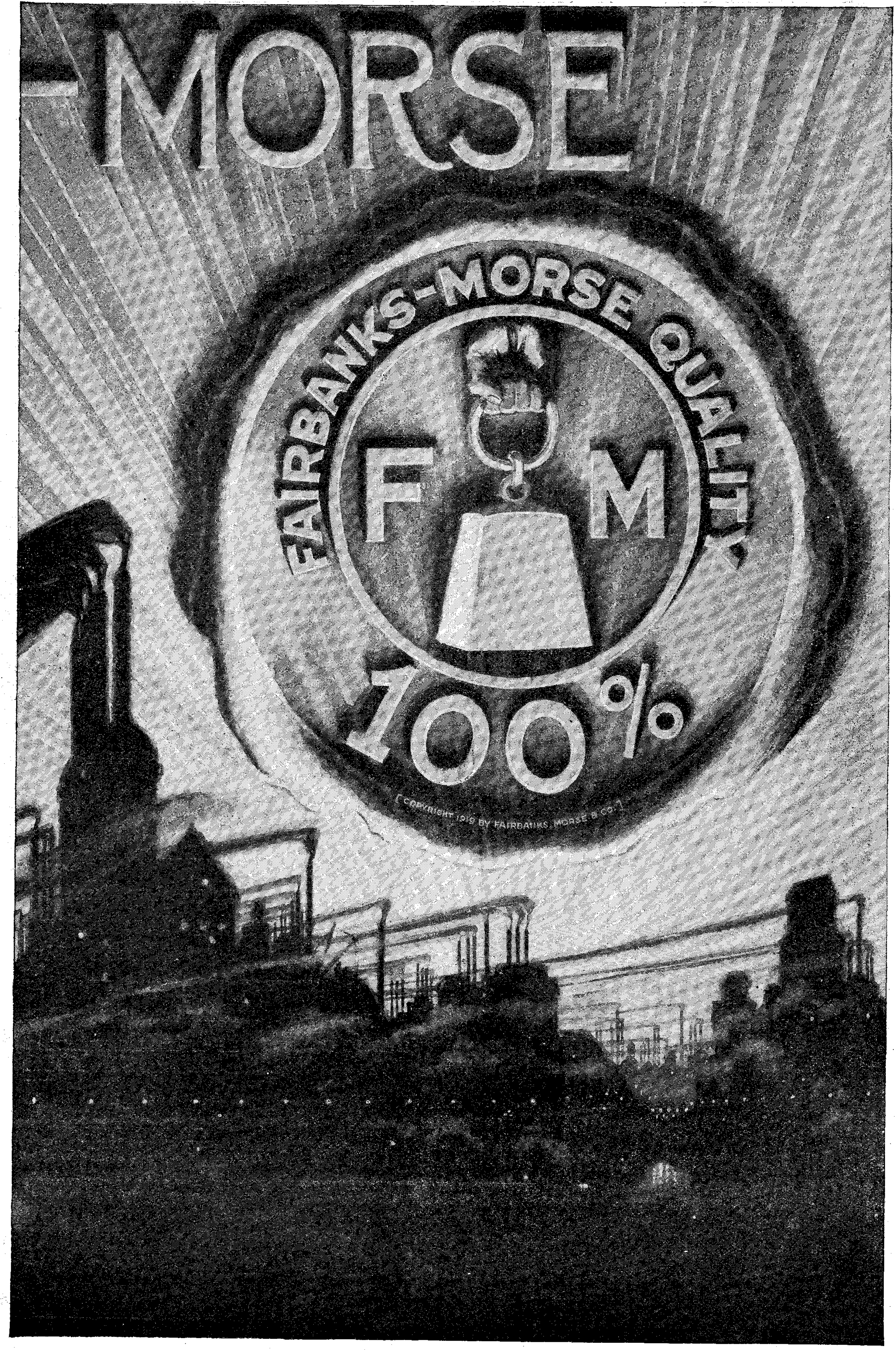
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BUSINESS • EFFICIENCY

"SALESMAN'S FRIGHT"—ITS HUMOROUS SIDE, ITS CAUSE AND CURE

STAGE fright is pretty well understood, even outside the theatrical profession, but there is another kind of fright of the same psychological origin that is far more wide-spread tho not so generally known. It is called salesman's fright, and in discussing it recently with a group of employers the agent of a large insurance company described it as the greatest problem with which he had to deal in handling his men.

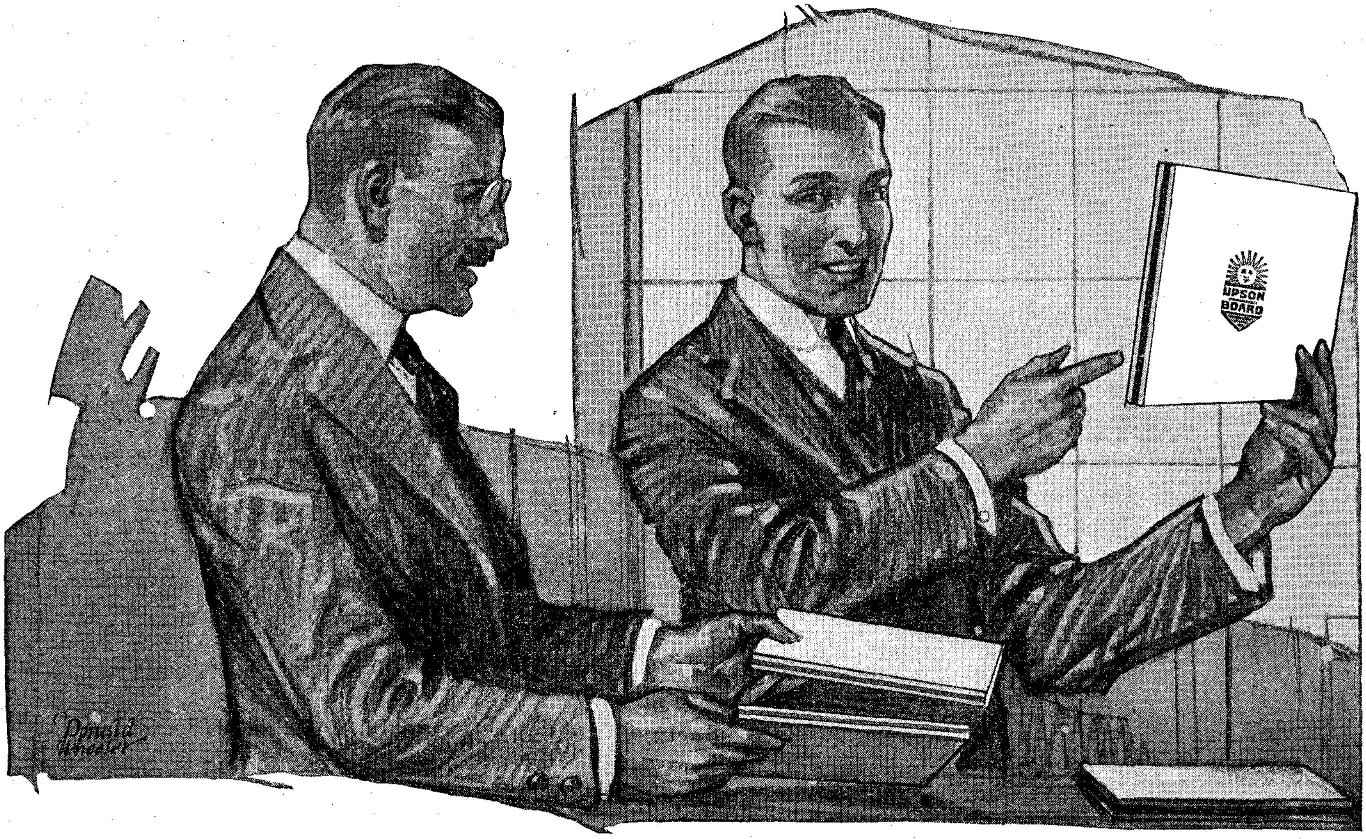
"Every few days I go over each solicitor's list of prospects with him," he said, "and he gets all primed up and ready to 'go to it,' so to speak. He appears ready to tackle any one, but the minute he gets near the door of a big prospect he begins to pray that his man will be out."

Essentially, this state of mind may be founded on a dread of responsibility, and a feeling of unworthiness, of timidity. The seller, in order to get keyed up to a proper pitch to convince his "prospect," so convinces himself of the responsibility and largeness of his task that he is afraid to begin it. Perhaps for days he has been under a great nervous strain, and, in the parlance of the athletic field which the modern business field somewhat resembles, he has "gone stale." His will is powerless to coerce his overwrought mind and body into doing what is demanded of them. A writer in *Printer's Ink* discusses this whole subject from a practical point of view, giving dates and cases, all with a view to demonstrating the ease with which most cases of "Salesman's fright" may be overcome. He writes:

> Selling fright can be such a drag on the day's work that surely it is worth while to know how some have overcome it.
>
> Selling fright as discust here is by no means confined to the green man. The veteran salesman who rests satisfied with a medium-sized order, when just a little more pushing would have secured him an order twice as large, is a victim of selling fright in its most insidious form. He had courage enough to call and get a good order—but not enough to bring back what his house really deserved.
>
> Selling fright is usually due to one or two major causes. The first is self-consciousness, timidity, or lack of proper self-valuation. The other cause is lack of familiarity with the goods to be sold.
>
> One of the most common causes of selling fright is the expectation or knowledge that the customer has a definite and strong objection which he will bring up at some point in the interview. Right here, many salesmen use the wrong tactics. They try to frame the interview so that the customer will get no chance to voice his objection. This shows plainly enough that the salesman has selling fright. And his fright causes him to make a serious mistake.
>
> A salesman whose income ran into five figures told me how he overcame this form of selling fright. One day he suddenly realized how this kind of stalling interfered with his selling. He decided to take the bull by the horns. His method went to the extreme. He had found that price often loomed big in the prospective customer's mind. He picked out a man to whom he thought his price would be a hurdle. Sitting in the objector's office, he began: "I dropt in to see you about taking on our line." Here he paused for an instant and eyed the victim speculatively. "But, of course, it will cost you a lot of money!"
>
> The prospect blinked a little, and then began to get red. "Well," was the reply, "What of it? Don't you think I have the 'lot of money'?"
>
> Thereafter the salesman stopt pussy-footing on buyers' objections. By taking hold of them right at the start, he has found that generally the objection very shortly vanishes in thin air.
>
> Selling fright often attaches to a buyer the wrong kind of a reputation. One case in point will illustrate a common experience. A Western buyer had the reputation of wanting to buy only in small quantities. A salesman coming for the first time into that territory had convinced himself that this customer would be better served if he would buy several times his usual quota of a certain kind of goods. The salesman exprest his belief to some brother salesman. They laughed at him. He landed in the big man's office. The big man looked rather bored. The salesman began, "Mr S——, I want to talk to you about buying $50,000 worth of our goods in one shipment!"
>
> The big man leaned forward with sparkling eyes. He smashed his fist upon the table. "Good!" he said, "That sounds like real business." Then confidentially, "Say, d'ye know—I get tired of folks running in to see me all day long about two hundred dollars worth of this and one thousand dollars worth of that!"

The writer cites the case of a salesman who gave a lesson to the "little-order" fellows. On taking on a new territory he found that buyers commonly preferred to buy from a factory near by such goods as he was selling, and so:

> He decided to open his talk in this fashion:
>
> "Mr. Smith, if distance is no barrier to you, I'd like to talk to you about taking on our line."
>
> More commonly than not, the answer came, "Oh, I don't know why a few extra miles should stand in the way of our doing business together."
>
> Several illustrations of this kind are given because they illustrate two important points. One is that the more the salesman tries to dodge an objection, the more afraid he becomes that he may not be able to meet it at all. The other point is that the salesman's willingness to handle an objection immediately and courageously makes the buyer feel that the objection isn't a very real one after all.
>
> Selling fright can often be fought right across its Hindenburg line by taking drastic measures. A salesman had called repeatedly, but without results, on one of the hardest buyers in a certain State. On a pleasant spring day he called again. He was told that his man had taken the day off to get his garden under way. The salesman secured the buyer's home address. Arriving there, he removed his coat and hat, placed them on the lawn in front, and sauntered out back of the house.
>
> The buyer eyed the salesman in amazement. The salesman began, "I called at your office, Mr. H——, but was told that you were here. As I can't get a train for several hours and having no more calls to make, I thought I'd come here and see if you'd let me help with the spading."
>
> The hard-shelled one loosened a grin. "Come ahead," he said. The two worked away, and when the salesman was ready to go, the buyer laughingly prest a real order upon him.
>
> Another salesman had been warned that the president of a certain gun-plant was an almost impossible person to handle. In fact, the report went, one might as well stay away and spend the time on some one else. Arriving at the plant, the salesman was shown into the president's room. The president started right in to live up to his reputation. "Sit down," he snarled. Then he turned to read his mail. The clock ticked on. Apparently all thoughts of his visitor were out of his head.
>
> The salesman finally arose in desperation, and walked over to an open window. Before it was a table on which rested a loaded gun. Outside on an ash-heap at some distance he noticed a shining tin can. Picking up the gun he aimed and fired.
>
> The president jumped up and ran over to him.
>
> "What'je shoot at?" he asked with great interest.
>
> The salesman told him.
>
> "Hit it?"
>
> "Yes."
>
> "Good shot!"
>
> "It's a peach of a gun," said the salesman, hefting the weapon appreciatively.
>
> "You're the first regular fellow that's been in here in five years," said the president. "Come on up-stairs and see how we make them." And the salesman left with a good order and a hearty invitation to return.
>
> So far we have said nothing about the only source of selling-fright which sometimes is incurable. Cause: the salesman is not himself thoroughly "sold" on what he has to offer. Obviously the only answer is to get "sold" or quit.
>
> Selling fright is not always due to greenness or thin skin of the salesman. Very often his employers fail to back him up in the way necessary to maintain his morale.
>
> A simple way to handicap a salesman is to fail in providing sufficient selling data on the goods to be disposed of. The salesman may then well fear unexpected questions to which he has no answer.
>
> Too big a territory often makes for selling fright, tho the salesman may not admit it. With too big a territory the salesman can not call often enough on his trade to keep well acquainted. And lack of acquain-



The greatest tribute ever paid a wallboard

The famous blue-center board conceded the creator of the world standard in wall board

UPSON PROCESSED Board is everywhere recognized as the standard by which other boards are judged and *compared.*

As *the* leader, it has been assailed and admired; praised and feared.

And, of course, it is *imitated*—for great achievement is always the target for the envious few who lack ability to create.

It has ever been so, whether the achievement be expressed in man or product of man.

If in man, other men pay honor by endeavoring to mould their lives like his. If in product, other men servilely pattern their product to approximate the standard.

In Upson Board has been *first* incorporated nearly every good quality that has made wallboard the *nearest* perfect lining for walls and ceilings.

So in Upson Board, too, was first conceived the idea of a board of *distinctive* construction—a board with a center colored BLUE and two light-colored surfaces—a ready means of identification for the buyer.

The world-wide *success* of *blue*-center Upson Board has however tempted others to profit by its success. They have therefore sought to *imitate* the appearance and construction by incorporating centers of other colors.

In so doing, they publicly acknowledge the superiority and leadership of Upson Board. They thus give their greatest *tribute*—the tribute of *imitation.*

Makes better walls and ceilings in every kind of building

Walls and ceilings of *lasting* beauty are possible in every room in every kind of building, whether home, store or factory.

Any good carpenter can quickly Upsonize any wall or ceiling that is unsafe or unsightly, without the muss and fuss of plaster.

You can obtain a hundred beautiful effects.

You can have walls and ceilings that *will never crack or fall.* And all at comparatively little cost.

Upson Board is different—not like other boards

By actual test, it is nearly *twice* as stiff and strong as most boards. It *holds* to the nails.

And while costing a trifle more at its initial purchase, by actual test it *saves* $5 to $15 per 1000 square feet in cost of decoration because of its smooth, non-absorbent surface.

The honor of the Upson name is inbuilt into every panel of Upson Board, through every step of making.

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Better than plaster for walls and ceilings—especially for re-covering unsafe or unsightly plastered ceilings.

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TRADE MARK REGISTERED

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The Upson Company
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THE DEPENDABLE BOARD WITH THE FAMOUS BLUE CENTER

There's a big difference in Peanuts – Only Pedigreed peanuts go into the Pennant Brand
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FRESH ROASTED
WHOLE
SALTED PEANUTS
CAUTION

Only the very choicest peanuts, from the finest that are grown in Virginia, are selected for the **PLANTERS PENNANT PACKAGES.** That explains the large size and delicious flavor of these tempting tidbits.

In the glass jars they are guaranteed to remain fresh and firm **ALWAYS,** if the lid is on tight, regardless of how long they have been on the dealer's shelves, or in your possession.

10-oz. jar, 50c; 6-oz. jar, 35c; Glassine bag, 5c

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To Dealers—If you are unable to obtain PLANTERS PENNANT PEANUTS, write to us at once, giving name and address of your jobber, and we will advise you how to obtain them promptly.

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HARTMANN
TRADE-MARK
WARDROBE TRUNKS

BUSINESS EFFICIENCY
Continued

tanceship is at the bottom of much doubt and wavering.

Finally, the experienced sales manager takes steps to keep up the courage of his men while they are on their trips. No matter how strong they are, salesmen may become battered in by continuous rough going. A cheery, newsy, confident letter from the man higher up is often of wonderful help. I have seen a blue, rainy day turn into a rosy opportunity on receipt of such a letter.

OVERTIME PAY FOR THE OVERWORKED "HIRED MAN"

WHY shouldn't the "hired man" of the farm be paid for overtime precisely like his city cousin who works in a factory? And, speaking of "hired men," why should the man who works on a farm have to bear the title of "hired man," anyway? He is no more a "hired man" than any other man who works for wages or salary, and the name, we are informed, has become tinged with a suggestion of reproach. Just now, when there is a large and increasing demand for farm production, when farm employees are unusually scarce due to the competition of high wages and short hours in the city, there is every reason for doing something to make mankind's "most useful, most noble, and most healthful" employment a little more attractive. The floating population that does much of the farm-work nowadays, especially in the West, is the favorite breeding-ground for I. W. W.-ism and other "Red" doctrines. An additional argument for better treatment for the farm-worker is that it will help to allay industrial unrest. However, the first consideration is the need to make farm-life more attractive so that the nation may continue to eat. C. F. Bley, writing from New York, takes up the matter in *The National Stockman and Farmer* (Pittsburg), to this effect:

> Much adverse criticism is made of boys for leaving the farm as well as of city labor not seeking farm employment; and of boys brought up in the suburbs under the environment, in a measure, of farm life, avoiding the farm. This failure, or action, may be attributed to several causes: (1) higher wages in industrial plants (it is perhaps true boys—and men—spend more money living in cities, but not necessarily so); (2) desire to learn a trade or a profession (the war and the attendant high wages paid to skilled labor have especially stimulated this desire); (3) sport activities and opportunities for social recreation in cities; (4) the still existent notion that "any one can be a farmer," the skilled trades and the professions being held in higher esteem by the public; (5) the fixt and gradually declining hours of work in shops and other industries (except on the larger and well-organized farms the working time is indefinite and one most confess in some cases almost unlimited, and "overtime" counts for almost nothing; whereas in other in-

BUSINESS EFFICIENCY
Continued

dustries workers are paid for all the overtime they put in at rate and a half).

The writer's convictions and conclusions are, that unless employing farmers come to appreciate that times have changed and adapt their policies to the up-to-date changed conditions the growing scarcity of farm help will continue and become more aggravated. A thing that the farmer has not learned in regard to labor that industrial employers have discovered is that there is such a thing as overwork, and that human endurance and efficiency have their limitations. Shop managers have found that production is better with reduced hours—that is. *pro rata*. In the writer's estimation a contributing factor to the distaste for farm employment is even the term "hired man"; he believes its use casts a reflection and a stigma on farm-work. In the industries, even the man with pick and shovel is called and classed as "employee"; this may seem like a mighty small thing, but life is really made up of small things. Then there is the isolated position or condition of help in farm-work—a man who works alone and all by himself in a field, removed from sight and hearing of a living person, while in industrial occupation he works in a group—that most men consider an advantage.

There is no valid reason why the farm-worker should be singled out as a "hired man"—he is no more "hired" than the skilled employee in the shop; while this seems like "straining at a gnat" all who have "been there" will, I believe, agree with the writer that it is worth while to consider.

What is the remedy or what are the remedies? Well, some things are necessarily as they are and can not be altered; on the farm different things in different and remote places often need attention and to be done at the same time and the several "hired men," if there be more than one, can not be sent to the same place, always; that's one thing that can not be changed, tho, in many cases, it is amenable to improvement. There are rush times on the farm; occasions when late hours are called for; the farmer may be pardoned for working till dark when planting a field of grain when rain threatens: it is excusable that he asks his men to work by the "light of the moon" when cleaning up a field of nicely cured hay before a threatened rain-storm; but how about extra compensation? "Nothing doing" on the farm. In shops and in other industries men not only receive full wages for overtime but are paid rate and a half. Of course, the farmer will answer that he can not afford such a policy—not even to pay anything for overtime. But he may as well look facts in the face and adapt himself to the times, before conditions grow even worse.

The farmer has a well-earned reputation for honesty, but is it honesty? Is it fair? Is it equity to ask men who started "chores" at 4:30 or 5 o'clock and were in the field loading hay at 6:30 or 7 o'clock, work all day under a broiling sun, and in the overheated hay mow with a prostrating heat bearing through the roof—is it fair when normal quitting time—six o'clock—comes and his men have already put in twelve to fourteen hours, to ask them, without a thought of compensation, to put in, for his sole gain, two and a half

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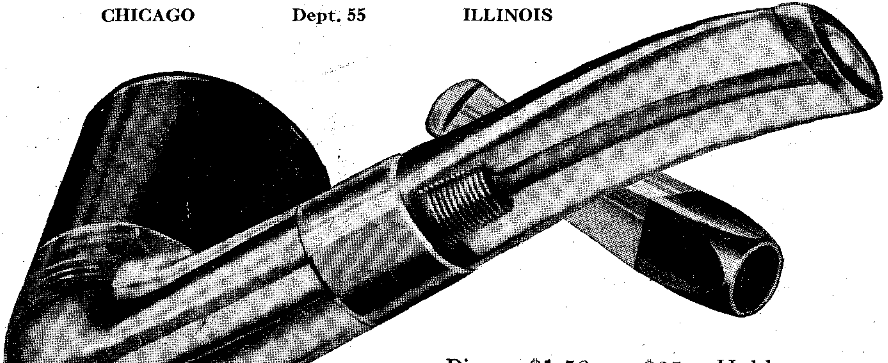

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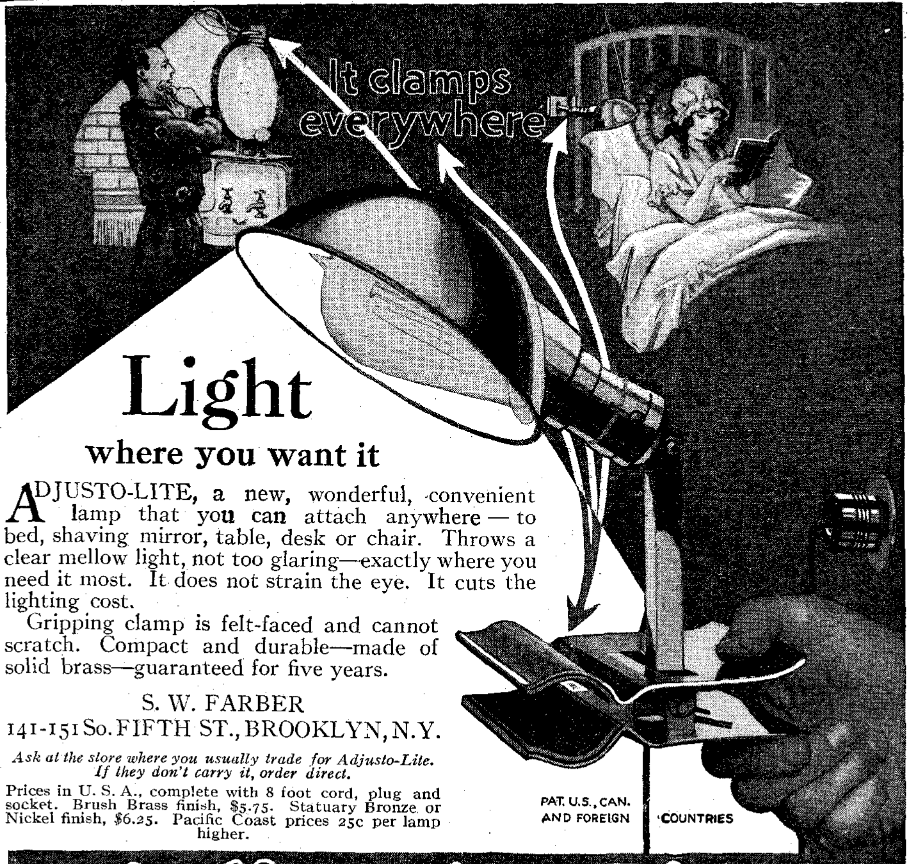
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Gripping clamp is felt-faced and cannot scratch. Compact and durable—made of solid brass—guaranteed for five years.

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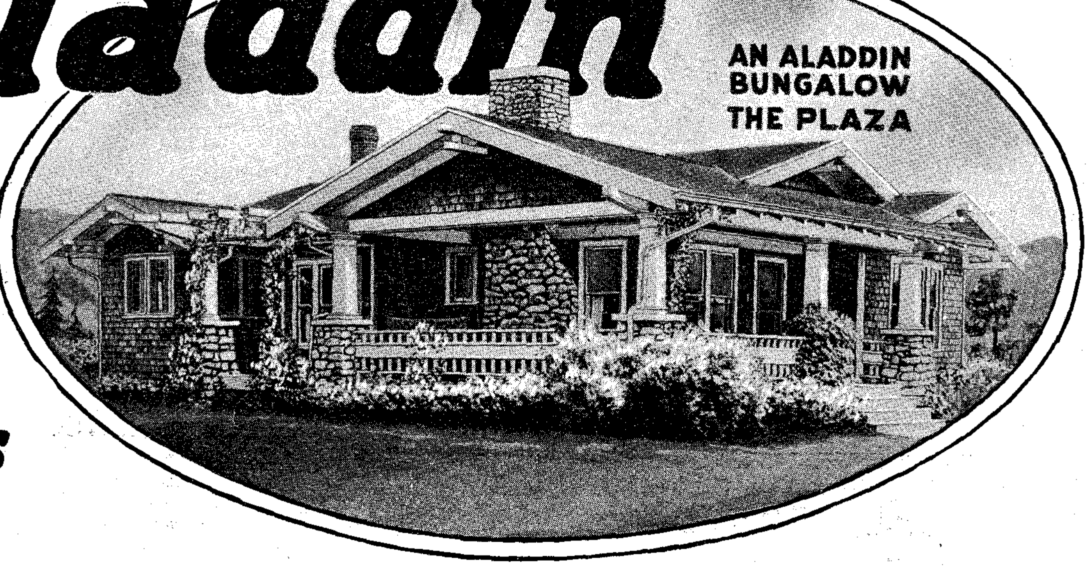
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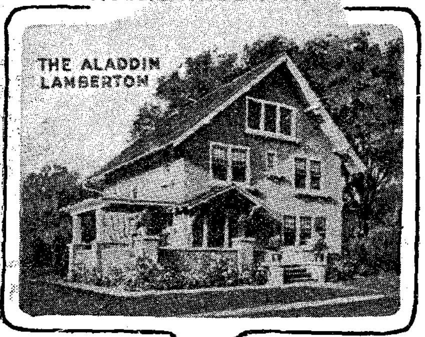
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Avoid Lumber Shortage—Build NOW

Lumber shortage—a virtual famine of lumber—exists in many parts of the country. Reports indicate it is impossible even now to get material for certain needs. Stocks were never as low as they are now. The demand was never as great as it is now. THIS MEANS STILL HIGHER LUMBER PRICES. It means that prices will go upward rapidly—that it will possibly take $150 in six months or a year to buy $100 worth of lumber at present prices.

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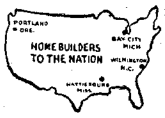
Aladdin taps the four greatest forests of the United States. Each one has sufficient standing timber to take care of the needs of the country for many years. The probable lumber famine predicted in all parts of the country will *not affect the Aladdin Co.*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HOME BUILDERS
TO THE NATION
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Every Aladdin house ordered in 1920 will be shipped quickly and *completely*. Sufficient lath and plaster for lining the interior of the home. Nails in necessary sizes and quantities. Beautiful grain, perfect quality interior trim. Doors of high quality material and excellent workmanship. Every item of the complete home will be *promptly shipped to every Aladdin purchaser in 1920*, regardless of shortages of lumber and other building materials in the general markets!

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Shipments of Aladdin Readi-cut Homes are made from the four greatest timber-producing sections in the United States. From the Atlantic to the Pacific—from Canada to the Gulf—Aladdin can serve you wherever you live. Aladdin houses are manufactured and shipped direct from the Aladdin Company's own mills in Michigan, Mississippi, North Carolina, and Oregon. Aladdin houses come to you in a straight line from the nearest timber region. Complete Sales and Business Offices are maintained in connection with each mill. Fully 24 hours' time is saved in your mail reaching our offices.

Dollar-a-Knot Quality

Aladdin's Dollar-a-Knot Guaranty proof of High Quality. Knotless lumber, the purest and clearest that ever came out of the forest, is the kind that Aladdin houses are made of. This is evidenced by our famous Dollar-a-Knot guaranty which has now been in effect for over four years. *Better quality lumber does* not grow. The highest grade paints, hardware, doors, windows, millwork, etc., are all included with every Aladdin house.

20 Feet of Lumber from a 16 Foot Board

The Aladdin System of Homebuilding has been practicing for 14 years the *principle* the *world* has only learned during the war—the elimination of waste of lumber and labor. The Aladdin Book explains this system thoroughly, shows how 20 feet of lumber is cut from a 16 foot board. The great Aladdin *Organization, composed of experts in* every branch of homebuilding, stands ready to help you build your home at a saving. Put this group of experts to work on your problem.

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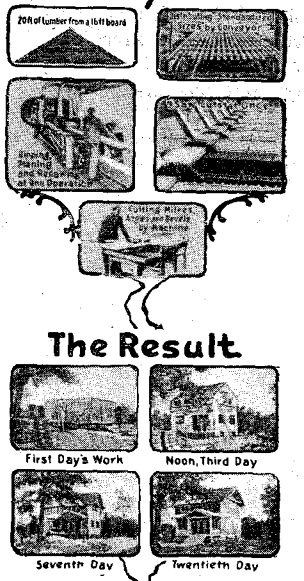
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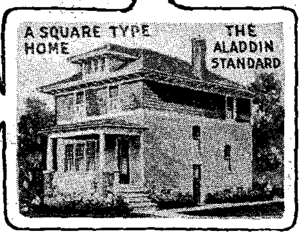
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BUSINESS EFFICIENCY
Continued

to four hours more? Let those who would justify such a practise come out in print and tell us how and by what manner of algebra they figure it out. If he confesses that it is unfair and unreasonable, but declares he can not avoid the practise, then he virtually says that farming is a failure; that it is not progressive; that it can not be adapted to meet the changed conditions of the present age! But would he then claim he can continue along the old antiquated lines? He can not do it! Men will not feel that farmers are a privileged class and that they—the men—must make unusual sacrifice—work a good share of their contract without remuneration—in plain words they "don't have to." They will continue their preference for the jobs that pay for all the time "punched" on the clock!

The farmer will argue that on the farm there are slack times—when it rains—that compensate the "hired man," but on the well-managed farm there are an abundance of odd jobs—some of them that might be mentioned not too pleasant—waiting to be done at such times. The writer would remind such that slack times also occur in shops, when men are even requested to "slow down" on production, while needed material is awaited; so that the farm-hand really has "nothing on" his city cousin from that score.

The farmer himself, if he works and has not yet joined the ranks of affluent capitalists, can feel, if he puts in overtime, that the extra sacrifice he makes working in the hay-field till bedtime is being paid for, but the man—well, that's where the "shoe pinches."

Getting right "down to brass tacks" what kind of a mood and what sort of incentive does such a practise create in the "hired man"?

Some of the larger industrial plants have adopted the cooperative profit-sharing plan; why can not the farmer make and adopt such an arrangement? Would not such a policy "pay" the farmer? And would it not meet the objections to overtime? The writer is not prepared to state what the hours of labor on the farm should be, but insists that they must be definite.

A hue and cry went up from industrial employers when union-labor forced them to adopt the eight-hour system. Since then State and Federal governments have adopted this standard and there is no longer any opposition. If the farmer adopted or the law fixt even twelve hours, including "chores"—"chores" are work, as much so as outdoor labor—that would be an improvement over the practise on most farms. If milking must begin before six o'clock in the morning and can not be done till after 6 P.M. then two hours instead of one at noontime would meet the requirement. As a matter of fact there is absolutely no "nooning" on the farm; after fifteen or twenty minutes spent at meal the horses must be fed and watered and other live stock cared for, even cowstables be "cleaned out"—a case of doing an unpleasant job "while you rest."

However, far from being pessimistic, the writer is sanguinely hopeful and predicts that progressive, intelligent farmers will set the pace that will once more make farming the most attractive as well as "the most useful, the most noble, and the most healthful employment of man."

A SALESMANSHIP SCHEME THAT SELLS THE FARMER MEDICINE HE DOESN'T WANT

A CHANCE to buy tombstones at a bargain is about as alluring as is a proposal to buy medicine for a disease not yet contracted, says Carroll Everett in the Dearborn *Independent*, and yet precisely that method of selling medicine and other products is the basis of an annual sale of $25,000,000 worth of goods. If a piano-manufacturer were to distribute pianos broadcast to protesting citizens, and insist upon leaving one in every home he visited, regardless of payment, assuring the reluctant householder that if he didn't want a piano then he might need one later, it would be not unlike this unique and gigantic trade which imposes itself upon the rural population by a sort of forcible distribution. And, strangely enough, the writer says:

> Approximately 97 per cent. of the products thus haphazardly placed are ultimately paid for willingly in cold cash by the very persons who, in the first place, protested vehemently against allowing them to enter the house. These goods, which are practically unknown to city dwellers and never advertised in newspapers or magazines, are not offered for sale through the usual channels by retail stores, but are disposed of through an army of 12,500 wagons.
>
> Most retail dealers, in fact, probably would have to confess never having heard of these flourishing houses, but if one is curious as to their size and standing, a glance at the rating of the concerns in the big commercial credit agencies is convincing enough. Their rating is uncommonly high. The assets of a single company in a quiet Minnesota town is around $8,000,000; while another in northern Illinois is rated at $4,000,000. In addition, there are perhaps fifty smaller concerns engaged in the same business, which bring the total assets of the medicine-wagon industry to approximately $25,000,000.
>
> One such firm boasts the largest single building in the world devoted solely to the manufacture of proprietary medicines, while another claims to own the finest administration building of its kind in America. Their annual purchases and importations amount to hundreds of train-loads, one firm handling five thousand car-loads of freight yearly.
>
> Despite the assaults made on the "patent-medicine" business, and the increased contacts of the rural population with urban life, these "wagon-houses" continue to flourish, and not merely to hold their own, but actually to increase the volume of business from year to year. Many of the sturdiest opponents of patent medicines would be astonished to discover how the traffic in this form of commodity, which they have assumed to be waning at a rapid pace, is waxing in strength by intensive cultivation in the more secluded districts of the United States and Canada.
>
> The secret of the success of these companies is that they have learned, and proved to their own financial satisfaction, that the American farmer, once he has allowed himself to be saddled with a tentative purchase, even tho against his will, will consider the bargain a binding one, and meet the obligation to pay, when it is finally presented.
>
> The promoters of this scheme of selling

—Kunderd's Wonderful—
New Ruffled Gladioli

Are by far the grandest in the world. All competent authorities will tell you that, and you are far behind on Gladiolus unless your garden has them. Handsomely illustrated booklet giving an interesting story of "The Modern Gladioli" and these wonderful New Ruffled Strains will be sent you free on request. Contains most complete cultural notes ever published and much other valuable information.

A. E. KUNDERD
"The Originator of the Ruffled Gladioli"
Box 27 Goshen, Indiana, U. S. A.

GOLDEN MEAT PECANS

When salted, make a delicious relish second to none; when sugared, a dainty confection that is wholesome and satisfying. Whether roasted and salted, or sugared, or eaten from the shell, you'll find the rare and delicate flavor of the pecan the most satisfactory of any nut. Let me send you a box by prepaid parcel post:

1 lb. Roasted Pecan Meats, Salted,	$1.50
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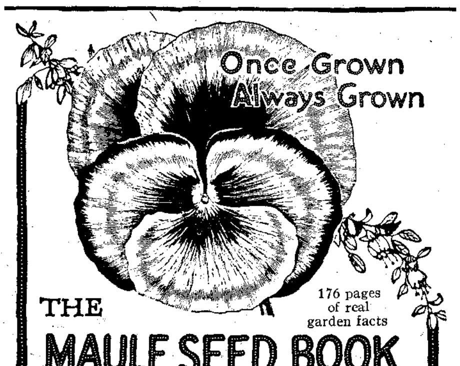

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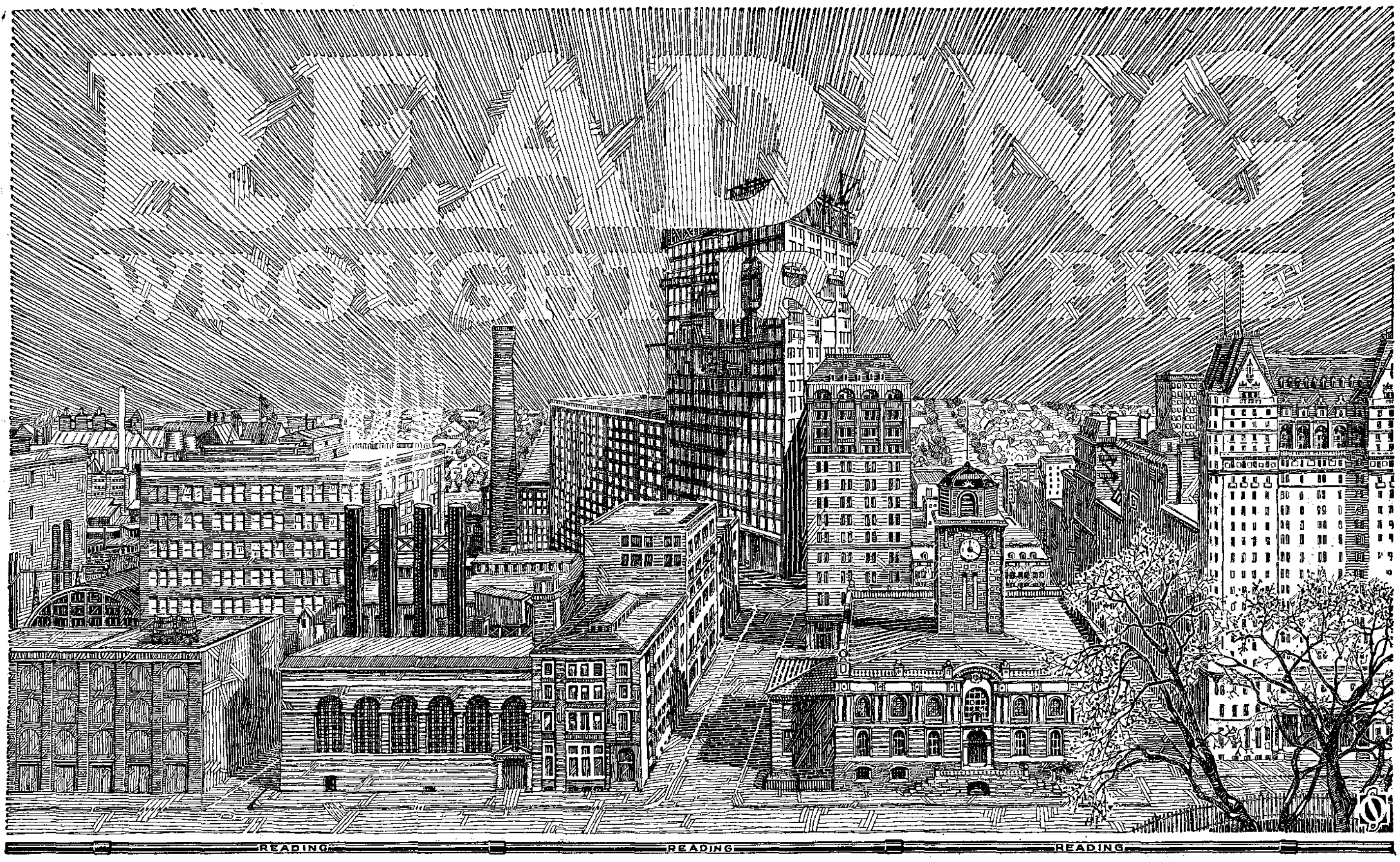


The veins of our civilization

¶ Did you ever try to picture to yourself what would happen to our domestic, business and civil life if we were compelled to do without pipe? A single large hotel presents a marvelously intricate network of more than a hundred miles of pipe. A modern locomotive depends for its life and power upon its two miles of pipe—striking parallels, both of them, with the human body and its miles of veins and arteries.

Will weak or brittle pipe serve your purpose?

¶ There are purposes served very well by brittle pipe of clay; others by bulky cast iron; others by heavy and costly ductile lead; others by crystalline steel; but where pipe must resist the attrition of rust, the destructive forces of vibration, the onslaught of torsion, none but pipe of wrought iron will measure up to the task. For wrought iron pipe is pipe with fibre—the sinews of silicious slag permeating its structure from its creation in the white heat of the puddle furnace.

Can you afford to replace your pipe after a short life?

¶ Have you ever had the misfortune of having to make good a job of leaky plumbing under a tiled floor or behind expensive paneling? Replacement costs include not only the price of new pipe, but of still more expensive skilled labor. Save or indefinitely postpone those duplicate labor charges by using wrought iron pipe in the beginning—the pipe of iron sinews.

Does it pay to build cheaply and take a chance?

¶ You insure your life; do you insure your reputation? If you are responsible for a job of piping, either as owner, as architect, or as contractor, is it not worth while, for the sake of your peace of mind, your professional reputation, your good name, to have that job done well rather than merely cheaply?

How much do all these advantages cost?

¶ The first cost of wrought iron pipe is about 30 per cent more than the ordinary crystalline steel pipe of commerce, but first cost, it is hardly necessary to remind the business man, signifies nothing unless we can compare it with the costs of maintenance and the product's length of life. It is in these that wrought iron pipe's sinewy strength, its cleanly cut threads, its ability to resist corrosion, raise it beyond the reach of competition from other materials.

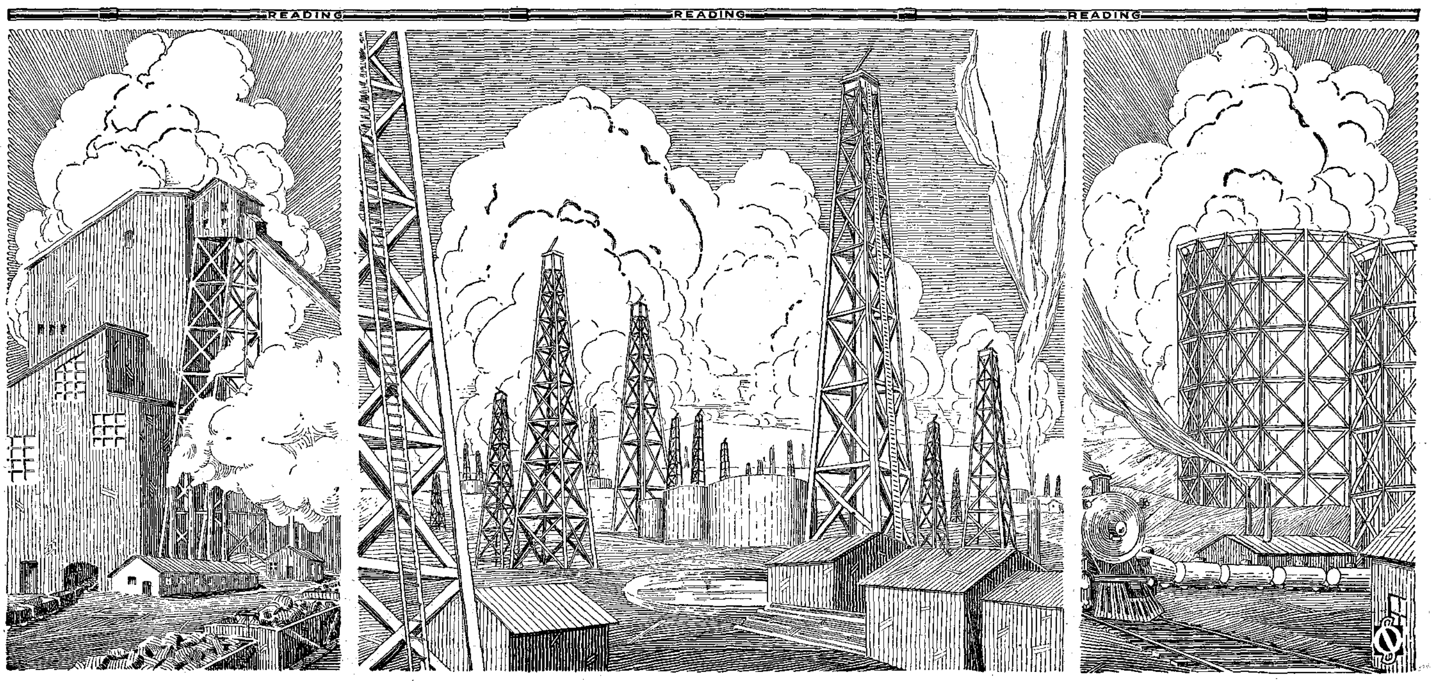
If wrought iron pipe, which is the best?

¶ For seventy-one years the Reading Iron Company has made wrought iron pipe—at present 552 sizes and kinds of tubular products, ranging in size from ⅛ inch to 20 inches in diameter. Its fourteen plants are today producing America's largest output of wrought iron pipe. Alone among manufacturers of wrought iron pipe, the Reading Iron Company controls the making of its pipe from blast furnace to puddle mill, from puddle mill to skelp mill, from skelp mill to tube mill, from tube mill to the shipping platforms where great magnet cranes load cars bound for every section of the country. The Reading Iron Company ships this embodiment of its long experience, its great organization, its good name, to YOU, to carry into the business structure of this country, the pipe of wrought iron, the pipe of sinews, the pipe that endures from generation to generation.

Specify Reading—the Pipe that Endures

READING
WROUGHT IRON PIPE

READING IRON COMPANY, Reading, Pennsylvania



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For centuries, the fight against rust and corrosion was waged courageously, relentlessly. Science battled with the sinister foe of metal with all the knowledge at her command. About a decade ago, after years of careful research and practical demonstration, this company announced the discovery of an efficient method for increasing rust-resistance, and KEYSTONE Copper Steel was given to the world. Years of service have now proved under most exacting conditions, that this wonderful alloy *does resist rust* to the maximum degree. The long service that it gives in the many forms in which it is used, is attested by every steel using industry.

The KEYSTONE trade-mark gives protective identification to every sheet of genuine Copper Steel. Look for it. We'll gladly send literature describing this remarkable product—

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COPPER STEEL

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Unequaled for Culverts, Flumes, Tanks, Bins, Vaults, Roofing, Siding, Spouting, Gutters, Cornices and all forms of sheet metal construction. Our Apollo booklet is of special interest to all users of Galvanized Sheet Metal Products.

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Manufactured by AMERICAN SHEET AND TIN PLATE COMPANY, *Pittsburgh, Pa.*

BUSINESS EFFICIENCY
Continued

have discovered, also, that the farmer will gradually acquiesce in this sort of forced selling, and tolerate the method of leaving medicines in his home, whether he wants them or not. He is easily led, once he is made to feel that he will not be made the victim of imposition or sharp practises.

The wagon-men are told at the outset by the companies which they represent that their prospective customers will say that they are not sick, have no use for medicine, and will not be interested in it. The wagon-men, by a complete system of sales instruction, are educated to expect these initial rebuffs, and to meet them tactfully. In other words, they appear to agree with the customer, but, at the same time, they manage to leave a few bottles and boxes behind. Many wagon-men thus practically stack their wares on the shelf beside the clock or on the kitchen-table, and walk out, unruffled.

This trick is, to their way of thinking, the first step of a sale. If they succeed in leaving something behind, the chances are that on their next visit some of it will have been used. The shrewd wagon-man knows that minor ills and injuries are likely to intervene—some one will have indigestion, or a touch of sore throat, or a sprained ankle, or a slight cold; and that, in this emergency, the mere fact that the medicine is on the premises will be a sufficient incentive to its use.

When these emergencies arise, some one in the family is certain to remember the bottles "which the medicine-wagon man left the other day," and to suggest that it won't do any harm to "try the stuff."

As a general thing, the medicines actually do have some slight effectiveness in relation to the ailments they are supposed to cure, and they are credited with the improvements which nature generally makes, so on the wagon-man's next round, in a few months, he finds the farmer willing to pay for the stuff left before. To be sure—

The family may "hand back" some of the compounds which they haven't opened, or which they may not have liked, but, in any event, the ice has been broken, and the wagon-man shrewdly repeats the process. This time there is less opposition to his cheerfully announced intention to leave a few more bottles of things which he thinks they might need some time.

As he puts them on the shelf, he disarms criticism by the assurance that "if they get cracked or broken it will be my loss—not yours." To this he is apt to add the bland explanation that his wagon is pretty well crowded, anyway, "so you won't mind my leaving these few things here until I come around on my next trip, will you?"

He is not the least bit disturbed by the response that they don't intend to use what is being left, for he knows from previous experiences that the chances are that they *will* use them.

By successive visits, the wagon-man ingratiates himself as a pleasant acquaintance. Country people do not meet salesmen so often as city people, and the visit of the wagon-man is often a welcome break in the monotony of farm routine. Therefore, after his first or second visit, when he has demonstrated that he will actually take back medicines, as he said he would, he can leave a wider range of his products.

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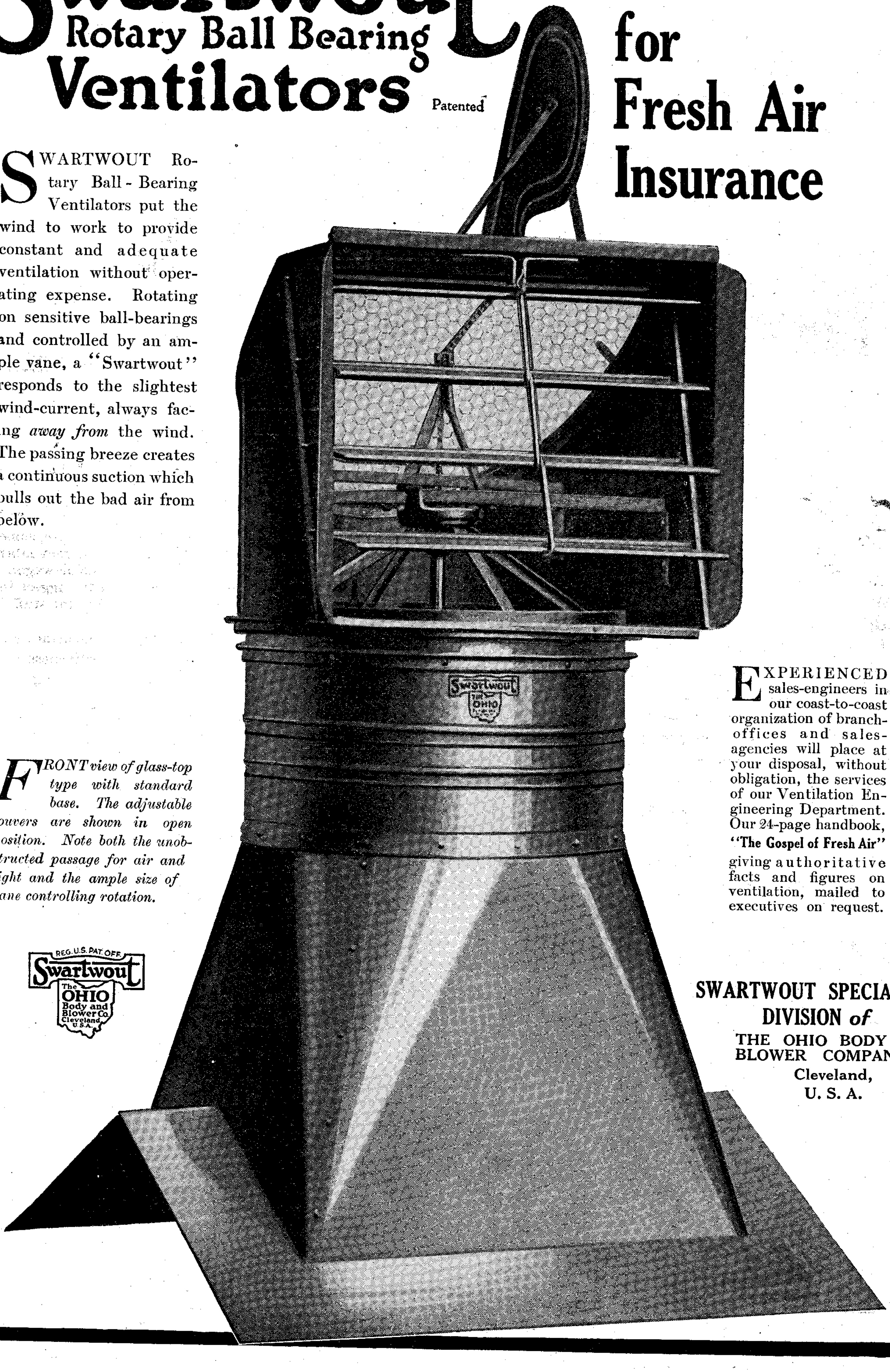
Patented

for Fresh Air Insurance

SWARTWOUT Rotary Ball-Bearing Ventilators put the wind to work to provide constant and adequate ventilation without operating expense. Rotating on sensitive ball-bearings and controlled by an ample vane, a "Swartwout" responds to the slightest wind-current, always facing *away from* the wind. The passing breeze creates a continuous suction which pulls out the bad air from below.



FRONT view of glass-top type with standard base. The adjustable louvers are shown in open position. Note both the unobstructed passage for air and light and the ample size of vane controlling rotation.

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EXPERIENCED sales-engineers in our coast-to-coast organization of branch-offices and sales-agencies will place at your disposal, without obligation, the services of our Ventilation Engineering Department. Our 24-page handbook, **"The Gospel of Fresh Air"** giving authoritative facts and figures on ventilation, mailed to executives on request.

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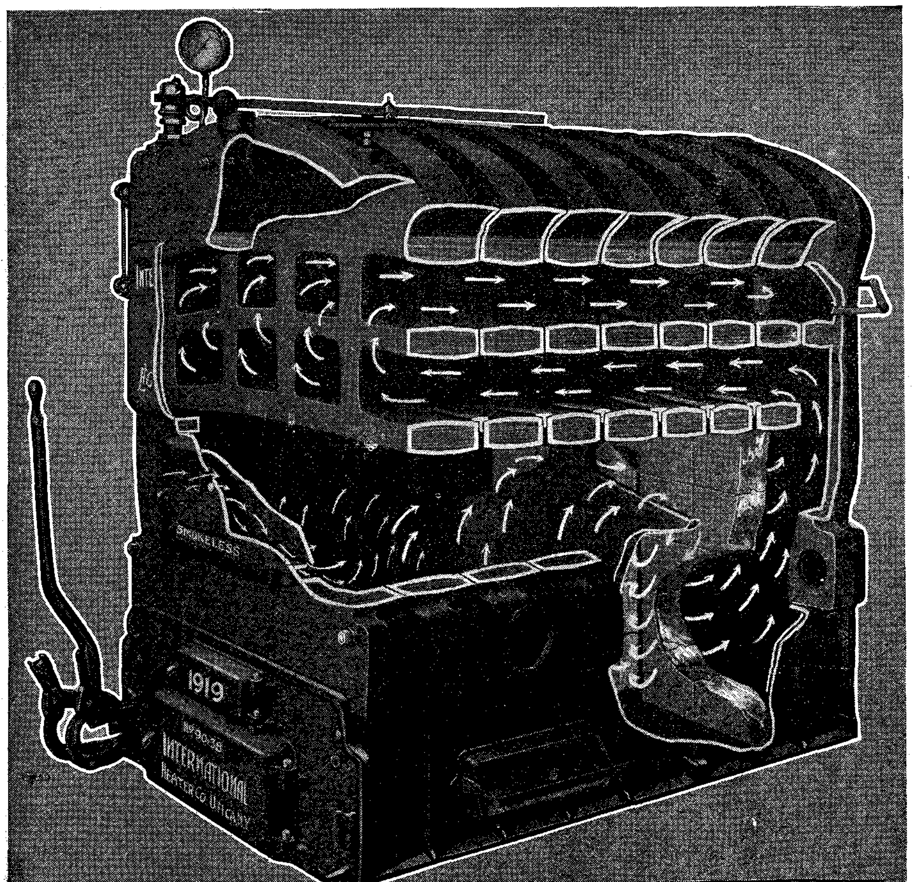

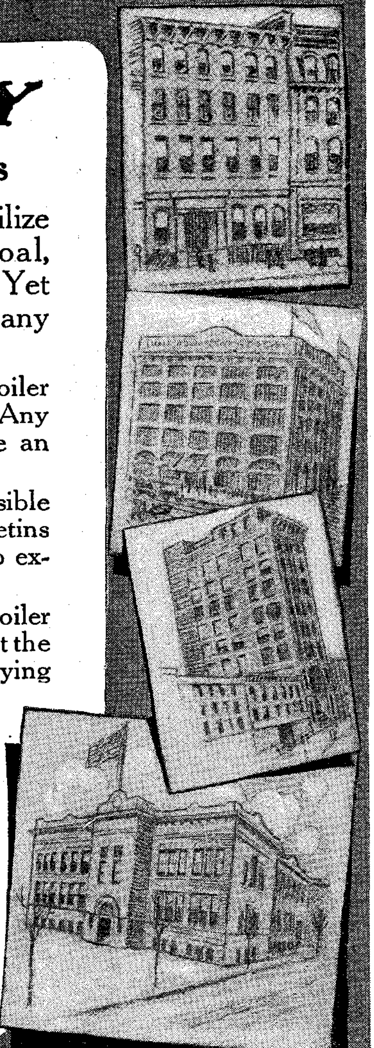

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They are fired like any updraft boiler and hold fire for long intervals. Any janitor or fireman can easily handle an Economy Smokeless Boiler.

Excess air control is largely responsible for high coal bills. Government bulletins claim 40% of all fuel waste is due to excess air passing through boilers.

In the International Smokeless Boiler excess air is conveniently controlled at the fire door, in front, to suit greatly varying demands in burning soft coal.

This is a distinctive feature of Economy Smokeless Boilers.

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INTERNATIONAL
HEATING SYSTEMS

BUSINESS EFFICIENCY
Continued

One medicine company puts out more than a hundred separate medicine products "for man or beast," poultry medicines, flavoring-extracts and spices, toilet articles, and so on. The fundamental purpose of the business is to sell the medicines, for the spices, extracts, and toilet articles, while profitable, are so much less so that they are sometimes said to be used to "float" the main products. For example, the housewife who might chase the wagon-man with a broomstick if he first offered her a bottle of horse liniment, may be lured to exercise her woman's prerogative of testing something needed in the culinary art. The wagon-man will first offer her a bottle of lemon-extract or a can of cinnamon as a bait for his major purpose.

It is relatively easy to get spices and extracts into a house. Then comes the real business of the salesman, which is to leave medicines. New wagon-men, who report large sales of "lodgments" of spices and extracts, are often admonished by their companies that they should devote their energies to leaving medicines. Customers are allowed voluntarily to buy and pay cash for the extracts. The big thing, which is always kept before the wagon-man, is to get his case inside the house. One of the first principles of the business is to avoid opening up the stock of medicines outside the house or on the porch. Once inside the doorway, pantry-shelves or kitchen-tables offer convenient places upon which to stack a selection of the medicines while discoursing upon their uses. Meantime, he insinuates himself into the good graces of the housekeeper by presenting a package of chewing-gum to the children and by admiring the baby, in the way he is taught to do by the bulletin of suggestions which he has received from the medicine-house.

The wagon-man always carries a highly diversified line of medicines, in order to suit all preferences. If the customer objects to this or that liniment or salve, there is always something else "just as good" in the wagon. It behooves the salesman never to praise any one brand more than another, else he will be put in the position of "knocking" one of his own products. He is cautioned by his employer to stick close to the statement that "they are all equally good, only some prefer one kind, and some another." Then he leaves a "selection" which he thinks most likely to win favor. The recruiting and training of the wagon-men are some of the curiosities of modern business. This is a field in which young men, with no sales experience and often of little schooling, are enabled to make large profits, if they have the requisite knack of making friends of their possible customers. A bottle of pain-or-blood-medicine, which the wagon-man sells for a dollar, costs him around thirty cents, giving him a far larger margin of profit than the average druggist enjoys.

In spite of the enormous increase in crude drug-prices during the war, the increases in wholesale cost of these products were slight. The logical inference is that a very little crude drug makes a vast lot of medicine. It has been stated that some of these manufacturers compute the minimum net profit on a basis of a dollar a day per wagon—or $300,000 a year profit from each one thousand wagons on the road. Thus a company with two thousand wagons should average $600,000 profit annually.

BUSINESS EFFICIENCY
Continued

At a low estimate, there are probably 12,500 wagon-men doing an aggregate business of $25,000,000 yearly.

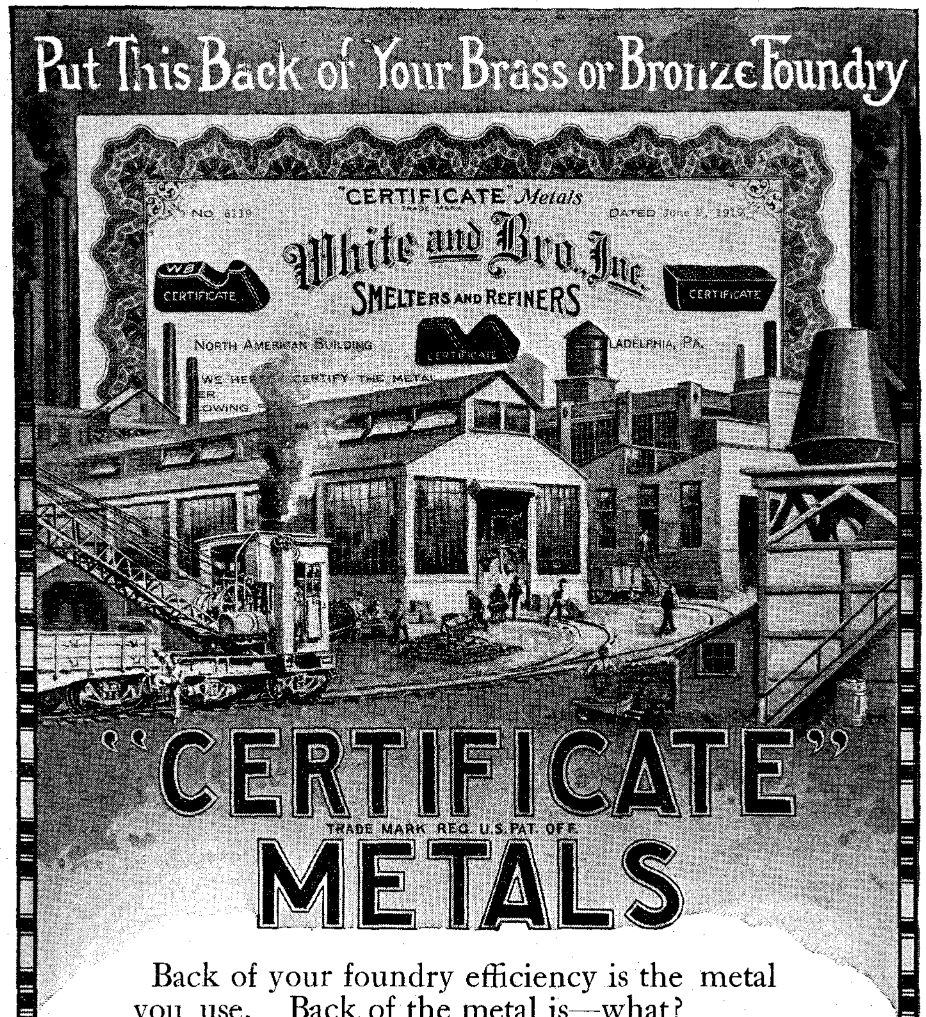
To the company's astuteness in training its workers is due the far-reaching influence of the trade, we are told:

> Wagon-men are warned not to ask customers: "Do you want anything to-day?" or in any way to open an avenue for refusal. The constant injunction is to do the customers' thinking for them, decide what they should have, and leave the goods.
>
> The word "should," as used in printed suggestions to the salesmen, has the force of command. So adroitly authoritative in tone are many of the suggestions that wagon-men frequently are under the impression that they are "working for the company" instead of legally in business for themselves. Altho the company is not legally the employer of the men, it frequently fosters that impression for the sake of the advantage it has in dictating to its agents.

THE GENTLE ART OF RUBBING PEOPLE THE RIGHT WAY

THE knack of doing and saying the right thing at the right time is a wonderful asset in business, and its absence is the cause of many a man's ill success. Strangely enough, it sometimes happens that these men have given considerable thought to this very thing of meeting people in a pleasing way, but have failed to get on to the real philosophy of it. The following story appearing in *System* (New York), and credited to a banker whose reputation puts him near the top of people who know how to rub people the right way, throws some light on this matter:

> When I entered the banking business a good many years ago I had a number of copy-book ideas about how I should meet people. "Always give a firm, strong grip in shaking hands." "Look the other man in the eye when you talk with him." "Let him know that you are glad to see him." Those were some of my ideas.
>
> They didn't last long, tho. Old Mr. Block, president of the institution, called me over to his desk one day in his abrupt way. "Young man," he began, "you are a promising chap in this bank. So remember that what I'm going to tell you is for your own good, to help you develop. I don't like the way you meet people, and I don't think that they like it. You act as tho you were doing it by rule. Act natural; don't be affected. If you are sincerely interested in the other fellow he'll know it even if you growl. Take that for what it's worth."
>
> That was the best advice that ever came my way. I left off my copy-book manners, and began to act more like a human being.
>
> Immediately I began getting along better with people. So I have ever since been using every-day man-to-man sincerity as my one method in dealing with men. This is all there is to it. It's so simple it's hard to believe.



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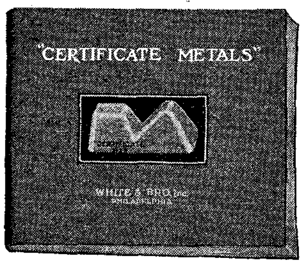
It eliminates waste due to excessive or deficient physical qualities of the metal.
It increases the efficiency of the foundry. It increases the efficiency of the foundrymen, because they can work with perfect confidence in their material.

We have standardized metal buying to make possible higher standards of efficiency in your foundry.

Let us send you This Book

An intensely interesting account of "Certificate" Metals, with photographic illustrations showing how "Certificate" Metals are analyzed by scientific laboratory methods. It throws a new light on metal buying.



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Then

Now

Then— In the caves and cañons of prehistoric times a boulder successfully barred the way of the primitive robber.

Now— In the man-built cliff dwellings of to-day, filled with the choicest treasures of the world, cunning and craft as well as brute strength must be foiled, and Corbin locks are used to meet the need. They will be found on guard in the great financial institutions, office buildings and public structures of our country—and the same type of mechanism is used upon the Corbin locks for homes.

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LOCKS

INVESTMENTS - AND - FINANCE

AN EXAMINATION OF THE WORLD'S CURRENCY INFLATION

NOW that Europe is again officially at peace, and European business can return to a peace basis, it is interesting to note how the world's banks weathered the conflict, and to turn to the elaborate and detailed figures gathered by *The Statist* (London) some weeks ago, and printed with editorial comment in its international banking section. After observing that war has been said to be good for banking, and that, judging solely by the increased dividends paid in many cases, the war-period has not been an unprofitable one, this British financial authority proceeds to consider the status of the world's banks from a number of standpoints; in particular that of note circulation, of gold holdings, and deposits. Referring first of all to the enormous increase in the issue of paper currency, *The Statist* expresses a doubt "whether it can be called good for banking to have profited from an inflation of the currency to which they have all contributed in a greater or less degree." Indeed, one bank is said to have frankly admitted "that the face value of the paper currency issued during four years of the war was greater than the value of all the gold and silver produced in all the world since the discovery of America." *The Statist* proceeds to examine the note circulation of the world's greatest banks immediately prior to the war and at present:

The Bank of England just before the war had notes in circulation amounting to £29,317,000: she has now in circulation £83,705,000, and if we take the amount of currency notes circulating in the United Kingdom, too, £338,436,000, we get a total of £422,141,000, as compared with £29,317,000 in 1914, that is, an increase of £392,824,000 in the paper currency of the country. Before the war, the Bank of France had issued notes to the amount of £236,476,000; she now has circulating notes to the value of £1,471,977,000, an increase of £1,235,501,000. The Imperial Bank of Germany's prewar total was £94,545,000; the figures on September 30, 1919, were £1,489,205,000, an increase of £1,394,660,000. The Bank of Italy's total shows an expansion of £347,646,000 in the notes in circulation. The total for the Austro-Hungarian Bank is £1,883,467,000, against £88,740,000 in 1914. Even the United States of America has not been able to refrain from adding to her paper currency: the notes outstanding in 1914 were of an equivalent value of £500,985,000; the total on August 1, 1919, was £734,457,000—an increase of £233,472,000. The increase in the Belgian note circulation is £123,124,000. It is, of course, impossible to state even an approximate value of the notes at present circulating in Russia, the total must be prodigious; but as a matter of interest we may say that the prewar total of the State Bank of Russia was equivalent to £163,411,000, while that on September 29, 1917, was £1,836,217,000—an increase of £1,672,806,000, and yet this does not take into account the enormous mass of Bolshevik paper currency issued during the last two years.

As will be seen from the table we give below, what is true of the countries we have named is true of practically every European country; all of them have worked the printing-press very hard, and in all cases there has been an unprecedented increase in the notes in circulation.

The comparison is between the figures in the latest returns available and those in the returns issued immediately before the great European War.

NOTES IN CIRCULATION OF THE WORLD'S GREAT BANKS, ETC.

Bank of	*1919* £	*Return Prior to War* £	*Increase* £
Denmark.....	25,312,000	8,693,000	+ 16,619,000
England......	83,705,000	29,317,000	+ 54,388,000
Cur'y Notes...	338,436,000	....	+ 338,436,000
Total Eng...	422,141,000	29,317,000	+ 392,824,000
Austria-Hungary....	1,883,467,000	88,740,000	+1,794,727,000
Belgium......	187,718,000	64,594,000	+ 123,124,000
France.......	1,471,977,000	236,476,000	+1,235,501,000
Germany.....	1,489,205,000	94,545,000	+1,394,660,000
Holland......	84,648,000	25,870,000	+ 58,778,000
Italy.........	414,091,000	66,445,000	+ 347,646,000
Japan........	102,821,000	31,254,000	+ 71,567,000
Norway......	24,468,000	6,608,000	+ 17,810,000
Spain........	151,676,000	76,760,000	+ 74,916,000
Sweden.......	39,540,000	11,456,000	+ 28,084,000
Switzerland...	36,897,000	10,716,000	+ 26,181,000
U. S. of Am...	734,457,000	500,985,000	+ 233,472,000
Total......	7,068,418,000	1,252,539,000	+5,815,909,000
Russia.......	1,836,217,000	163,411,000	+1,672,806,000

Something can be said for this enormous increase in paper promises to pay if there has been anything like a corresponding increase in the metal-backing to the notes. "But what are the facts?"

Take England: with notes to the value of £29,317,000 in circulation in 1914 she held £40,164,000 gold. In 1919 with £422,141,000 notes current, the gold held amounts to £114,746,000, or an increase of £74,582,000, in the gold held, against an increase of £392,824,000 in the value of the notes in circulation. France shows an increase of £58,817,000 in her gold against an increase of £1,235,501,000 in notes. Germany, with an increase in her note circulation of £1,394,660,000, shows a decrease of £7,381,000 in the gold she holds now as compared with 1914. The fall in the amount of gold held by the Austro-Hungarian Bank is very great; there is a decline of £77,878,000 as compared with 1914: on September 23 last she only held £10,862,000 gold against a note circulation of £1,883,467,000. Italy's gold holding, too, shows a decline of £11,784,000 as compared with the prewar amount. Russia's gold holding, taken on the same date as that for the notes, September 26, 1917, shows an increase of £185,879,000 against an increase in the note circulation of £1,672,806,000. Holland, with an increase of only £58,778,000 in her note circulation, has increased her gold reserve by £39,172,000. The expansion in the gold holding of the Bank of Japan is worth noting: it has increased from £21,872,000 to £75,428,000, while the increase in her note circulation is only £71,567,000. The United States has the lion's share of the world's gold, the latest return giving £497,910,000, an increase of £120,456,000, as compared with five years ago.

The full table is as follows:

GOLD HOLDINGS OF THE WORLD'S GREAT BANKS, ETC.

Bank of	*1919* £	*Return Prior to War* £	*Inc. or Dec.* (+) *or* (−) £
Denmark.....	10,416,000	4,100,000	+ 6,316,000
England......	86,246,000	40,164,000	+ 46,082,000
Cur'y Notes...	28,500,000	....	+ 28,500,000
Total Eng..	114,746,000	40,164,000	+ 74,582,000
Austria-Hungary....	10,862,000	88,740,000	− 77,878,000
Belgium......	10,642,000	10,414,000	+ 228,000
France.......	222,993,000	164,176,000	+ 58,817,000
Germany.....	54,829,000	62,660,000	− 7,831,000
Holland......	52,681,000	13,509,000	+ 39,172,000
Italy.........	32,216,000	44,000,000	− 11,784,000
Japan........	75,428,000	21,872,000	+ 53,556,000
Norway......	8,161,000	2,892,000	+ 5,269,000
Spain........	96,406,000	21,739,000	+ 74,667,000
Sweden.......	16,662,000	5,878,000	+ 10,784,000
Switzerland...	18,932,000	7,202,000	+ 11,730,000
U. S. of Am...	497,910,000	377,454,000	+ 120,456,000
Total......	1,222,884,000	864,800,000	+ 358,084,000
Russia.......	360,388,000	174,509,000	+ 185,879,000

"Gee, Mother, that suit'll look like new. The spots will all come out and the shine be taken off.

Shine-Off

BACKED · BY · UNITED · STATES · PATENT

"certainly does the work"

Removes Grease and Oil Spots, Scorch, Fruit Stains, etc., without leaving a ring. The spots **can't** come back. Takes off shine **scientifically** by raising a new nap. Nothing else like it. Non-explosive, non-poisonous.

Thousands of people are getting more wear out of their clothes by using Shine-Off. **25 cents (Canada 35 cents).**

Shine-Off should be in every home, office and traveling bag. If your dealer hasn't yet stocked Shine-Off send us his name, this ad and **25 cents** *for a package.*

UTILITY PRODUCTS COMPANY
Dept. 281B 1726 Lytton Bldg., CHICAGO

Soothe Your Troubled Skin With Cuticura

All druggists; Soap 25, Ointment 25 & 50, Talcum 25. Sample each free of "Cuticura, Dept. 6B, Boston."

It is worth anyone's while to seek the best

Checona

A drink to be lingered over and enjoyed to the last drop

Evan's Beverage

Comes to you with all the Prestige of Evans' 134 years of excellence

FORMERLY KNOWN AS CHECONA EVANS ALE

A delicious, healthful and substantial beverage that can be taken with confidence and enjoyment by everyone. It is a food-drink, full of life as well as substance, non-intoxicating yet stimulating, brimful of pleasure and satisfaction. A typical Evans product.

Leading Hotels, Restaurants and Dealers
C. H. EVANS & SONS Estab. 1786 HUDSON, N. Y.

Let Us Send You this Suit

made to your measure, payable after received, with the clear understanding that if the fit is not perfect or if you are not satisfied in every way, if you are not convinced you have received a fine, high grade, stylish, perfect-fitting tailored suit made to **your** measures and have saved $15.00 to $20.00, you are not under the slightest obligation to keep it.

Don't hesitate or feel timid, simply send the suit back, no cost to you. You are not out one penny. Any money you may have paid us is refunded at once.

Samples Free. Any man young or old interested in saving money, who wants to dress well and not feel extravagant is invited to write us for our free book of samples and fashions explaining everything. Please write letter or postal today, just say "Send me your samples" and get our whole proposition by return mail. Try it—costs you nothing—just a postal, get the free samples and prices anyway. You will learn something important about dressing well and saving money.

PARK TAILORING COMPANY
Dept. 17 Chicago, Ill.

BERNARD PLIERS

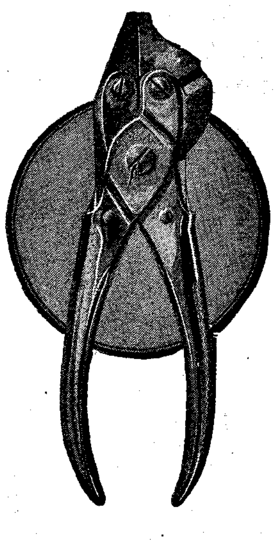
You Can't Beat These Pliers

You just can't beat Bernard Pliers. Bernards are the Standard High Powered Cutting Pliers. The strength is all in the Bernard patented principle of compound leverage—and not in your hand.

That's why they hang on with such a stubborn grip. That's why they can't let go until you release the pressure. Note those square hitting parallel jaws that meet like a vise and hold as hard. You can't match them for cutters. They bite through metal that old fashioned pliers can't dent. When you use Bernards, something has to *give.*

BERNARD
Reg. U. S. Patent Office
PLIERS

are made like instruments and are quality all through. Their workmanship is beautiful. They are finished in nickel to keep out rust. The handles are broad enough to fit the hand and are closed up inside so that no edges are exposed. Bernards are guaranteed against defect and will be replaced if found wanting through any fault of ours.



Don't overlook the Bernard open throat and hollow centre. You can shove a long wire or rod right through the parallel jaws and take a firm grip anywhere you want to. It's great for bending or stretching wire.

Bernards are needed in home, office, store, garage or factory. They are great at the bench. For opening bales, boxes or packages bound with wire they are unequalled. And after long hard wear of every day factory use, if a cutting blade becomes dull it can be replaced at reasonable cost instead of having to buy a new tool.

Rely upon Schollhorn Service to solve your plier problems. Write for our vest pocket size Field Catalog, picturing the Bernard line. Promptly mailed with our compliments.

Bernard Pliers are sold by all first class hardware dealers and tool houses. Look for the name "Bernard" stamped on each pair.

Sizes 4½", 5", 5½", 6", 6½", 7" and 8".

WM. SCHOLLHORN CO., SPECIALISTS IN PLIERS, NEW HAVEN, CONN.

INVESTMENTS AND FINANCE
Continued

The tale told by the two tables may be given in a few words. Against an increase of £7,498,715,000 in the notes in circulation, there has been an increase of only £621,841,000 in the gold held; in other words, about one-tenth, or £6,876,874,000 worth, only of the paper currency of the principal countries of the world is covered by gold. Such is the pass to which a little more than four years of war has brought international banking! Who shall say we have progressed much since the days of the worthless French assignats?

The effect of this almost overwhelming mass of paper currency on the foreign exchanges between the countries which have been the principal offenders in launching forth the "money" has been disastrous. We have Great Britain at the present time surrendering £1 to Holland in exchange for 10 fl. 97 c. against 12 fl. 10 c. in prewar days; Spain considers our currency worth no more than 21¾ pesetas—she was paying over 26 pesetas for £1 just prior to the war. America takes a heavy toll by offering but $4.16 [now $3.66] for the British currency unit which was worth to her nationals over $4.86 in 1914. France finds herself called upon to surrender over 36 francs to the pound sterling instead of a little over 25¼ francs, at which she could purchase it in 1914; Italy is paying more than 42½ lire to the £1 against less than 25½ in 1914. Germany finds her currency next to worthless in most centers—in London she is surrendering 115 marks for £1, which compares with a value of 20.53 marks in August, 1914; and so it goes on. The increase in the volume of the currency in circulation in all the countries which have been recently at war has resulted in a record depreciation, and yet our universal currency providers go on turning out more paper promises to pay, apparently in blissful ignorance of the havoc they are causing.

Concomitant with the tremendous expansion in the world's note circulation there has been a great advance in bank deposits, *The Statist* points out. This is, of course, "all part and parcel of the inflation of the currency," says the London editor, who tells us that "in 1914 the deposits of the fifteen national banks named in the preceding tables amounted to approximately £5,400,000,000; in 1919 the approximate total was £15,000,000,000—an increase of £9,600,000,000." It is noted that "the deposits of twenty-two banks in the United Kingdom on June 30, 1919, amounted to £1,917,868,736 against £874,891,969 in 1914—an increase of £1,042,976,767." *The Statist* concludes that the "bubble of inflation has reached its present great size through (*a*) an enormously increased note circulation and (*b*) a phenomenal expansion in banking deposits."

Passing on to an examination of the figures of some of the leading banks in the principal countries it begins to dawn upon one, we are told, "that war is not the profitable thing for the banks that our politicians would have us believe." From several pages of banking statistics and editorial comment we quote a few paragraphs showing the war's effect in France and Germany. The London paper presents a tabulation of the liabilities and assets of the six leading banks of Germany for the past eight years, and calls attention to certain significant facts brought out therein. In 1913 the proportion of capital and reserve to liabilities stood at 14.3 per cent.; the war has brought it down to 4.1 per cent. This is said to be due largely to abnormal increases in deposits. Deposits for the six

INVESTMENTS AND FINANCE
Continued

banks increased from 4,914,291,000 marks in 1913 to 22,267,948,000 marks in 1917 and to over thirty million marks for five of the six banks in 1918. The acceptance business has fallen away from 10.6 per cent. of the liabilities in 1913 to 5 per cent. in 1918. Coming to the assets side, *The Statist* finds that the proportion of cash in hand has declined from 11.7 per cent. in 1913 to 16.9 per cent. in 1918. Investments are more than half of the total assets in 1918 as against 11.7 per cent. in 1913. And it looks to *The Statist* "as if the German banks are carrying a very heavy proportion of war-loan and other such issues on their shoulders, tho in that respect they do not differ much from the banks of any of the other belligerents; all have subscribed very freely for the various war-loans, which consequently loom very largely in their investments." Total assets are 56,726,267,000 marks as compared with 19,199,610,000 marks in 1914.

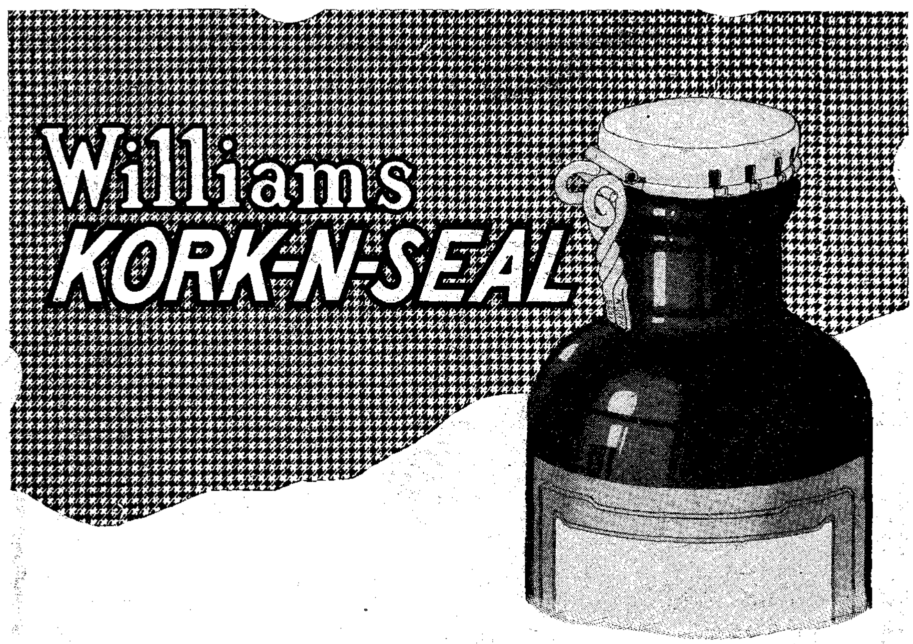
Taking up the four leading banks of France in the same way, *The Statist* calls attention to these important facts contained in its tabulations:

> The proportion of the total capital and reserve to other liabilities has fallen from 9.6 per cent. in 1913 to 2.3 per cent. in 1918. The proportion of notes in circulation has also gone up from 40.6 to 71.7 per cent. The percentage of the deposits and current accounts has, however, fallen, and in that respect the result differs from that of the German banks. The figures are 25 per cent. in 1918, as against 47.3 per cent. in 1913, and the explanation evidently is, that both the people in the invaded districts of France and those who sought sanctuary elsewhere, were obliged to draw on their savings for sustenance. The proportion of cash in hand has fallen from 33.2 per cent. to 21.4. Investments show a marked expansion, the percentage to other assets having risen from 4 per cent. in 1913 to 50.3 per cent. in 1918. The percentages of bills discounted and advances have both fallen, the one showing a decline of 10.3 per cent., and the other 11.4 per cent., which shows that the trade of France has suffered badly during the four and one-half years of war. Total assets have increased from 14,060,170,000 francs to 42,198,996,000 francs.

WAR-SAVINGS STAMPS AND CERTIFICATES FOR 1920

The Treasury Department recently issued a statement concerning the 1920 issue of war-savings securities. The War-Savings Stamps of this year will be carmine in color, and the size will approximate the larger stamp of 1918. Change is also announced in the 1920 Treasury-Savings Certificates as compared with those of last year, in that those for 1920 are redeemable at the Treasury beginning with the second calendar month after the month of purchase without the ten days' demand required under the terms of the 1919 certificates. Circulars announcing the issue of the new war-savings securities have been issued, and the securities are now on sale at post-offices and other agencies, consisting principally of incorporated banks and trust companies. The announcement, as quoted in *The Commerical and Financial Chronicle*, says:

> In view especially of the gratifying increase in recent months in the sale of the 1919 securities, following the postwar reaction, it is anticipated that during the coming year the 1920 securities will be purchased in large volume and that the

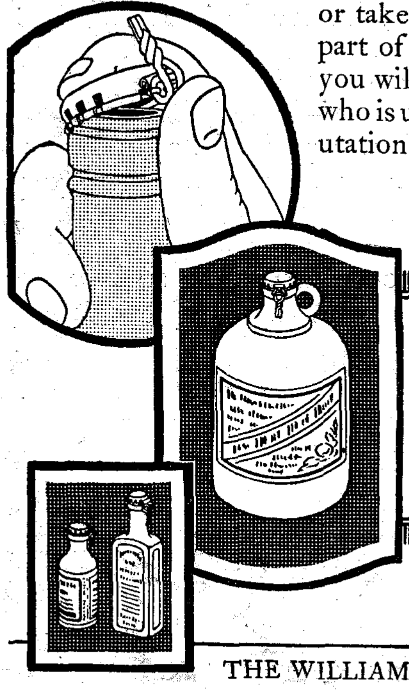


The seal of a perfect product

Snap!—lift the lever and it's off. Click!—and it's back on. That's how simple it is to open and then reseal any bottle that is capped with WILLIAMS *Kork-N-Seal.*

You need no corkscrew or tool of any kind. And how absolutely it reseals!—as often as required, always protecting the unused contents, keeping the quality and the strength unimpaired. It seals so perfectly that you can place the bottle on its side in the ice-box or in your travelling bag. The liquid cannot spill or leak past the cap.

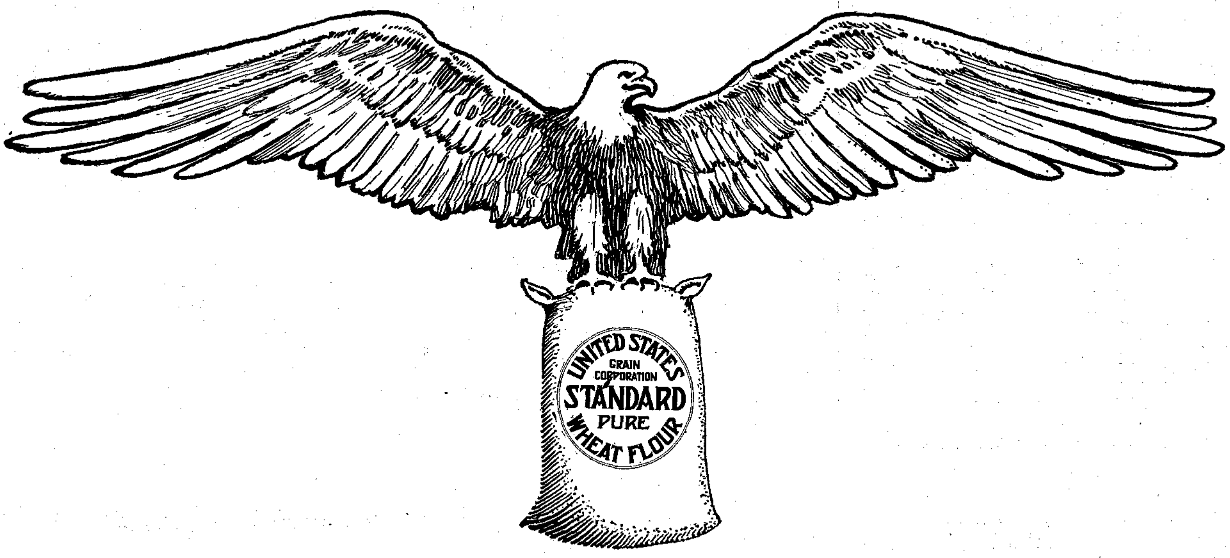
The simple quality and enormous convenience of the *Kork-N-Seal* is so convincingly apparent, that every time you use your Peroxide or take some Catsup, or use any part of a *Kork-N-Sealed* bottle you will thank the manufacturer who is using it to maintain the reputation and quality of his goods.



TO MANUFACTURERS

We have just published a pocket-size book on *Kork-N-Seal.* It is very readable, written in story style, yet tersely; crammed with information that any man who bottles anything will appreciate; comprehensive and interesting. Will send it if you wish, without charge.

THE WILLIAMS SEALING CORPORATION—*Decatur, Ill.*



TO AMERICAN FLOUR CONSUMERS

DURING the war, twelve million American housewives pledged by a signed card, to follow the suggestions of the Food Administrator, and thereby accomplished marvels in food saving.

Since the Armistice, and with the relaxation of this effort, the course of food prices, uninfluenced by that former intelligent direction and suggestion, has been such as to indicate either a degeneration of the thrift spirit or inability or unwillingness to correct inequalities of supply and demand.

The United States Grain Corporation, a Government agency, aims to bring to the attention of our people that, as never before in our history, there is the opportunity to practice thrift by individual selection in the purchase of flour.

There is no longer authority to prescribe a uniform method of extraction of flour from the wheat berry as was done during the war. Moreover, except in times of war, the individual preference of our people should be touched lightly, if at all. But that individual preference should be so informed, by accurate information, that it will make its choice with open eyes.

Therefore, the Grain Corporation has taken the position that our people should have an opportunity to buy, in the retail stores, lower-priced flour made from the variety of wheat which is in abundant supply.

With this opportunity offered them, they may still prefer to purchase at greater cost that particular quality of flour, highly separated, and requiring for its extraction that variety of wheat from sections where lighter crop yield has caused a higher price.

The clamor of disputants regarding the relative value of various flours from various varieties of wheat, has raged for generations, and will always afford a basis for controversy, more or less sincere. But the broad general fact can be stated that those qualities that prove perfectly satisfactory in general household use are found, for peculiar crop reasons this year, in the lower-priced flours. For pastry and cake-making the lower-priced flours will be found actually superior. You are the best judge in actual test.

> THE GRAIN CORPORATION *prefers that these varieties of flour reach the consumer through the usual trade channels, the mill, the wholesaler, and the retailer, in private trade and outside of the agency of the* GRAIN CORPORATION. *In carrying out, however, its policy of giving the consumer the chance of selection in the practice of thrift, the* GRAIN CORPORATION *is having its export purchases of flour packed in suitable retail packages under the brand* "UNITED STATES GRAIN CORPORATION STANDARD PURE WHEAT FLOUR." *In those communities where private trade and individual initiative have not supplied a similar quality and at a similar price, we shall induce some retailers to handle this* GRAIN CORPORATION *flour.*

Therefore, I am justified in advising the American consuming public that this choice now is theirs; that in retail communities, they may buy this perfectly acceptable flour at about $1.50 for the eighth barrel paper sack or they may pay about $2.00 or even more for their insistent selections of other special qualities. So far as this enterprise has now progressed, I am confirmed in my belief that a considerable section of our people has not been drawn into an orgy of thoughtless spending as charged against us all, that they value and practice thrift, and thank us for informing them of this opportunity for their choice.

Julius H. Barnes.

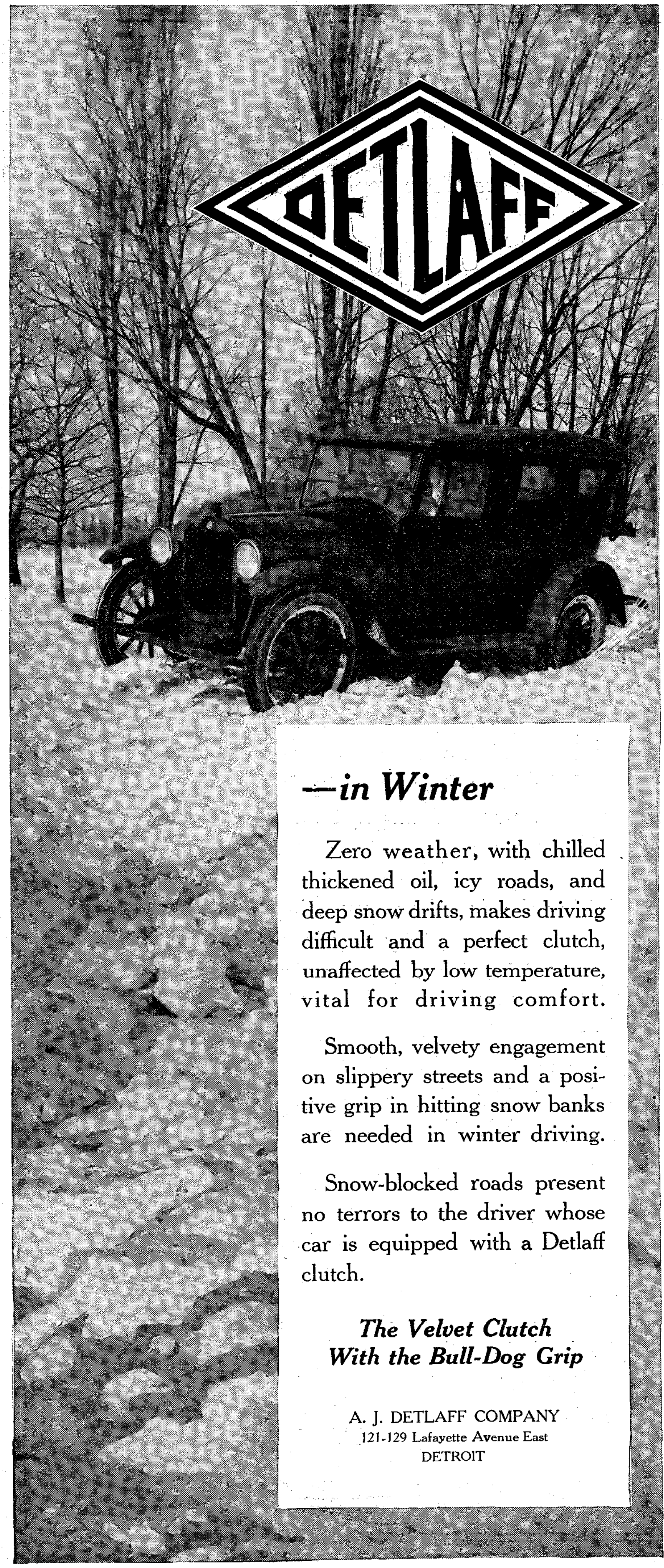
United States Wheat Director

For further information write

UNITED STATES GRAIN CORPORATION

FLOUR DIVISION

42 BROADWAY NEW YORK



—in Winter

Zero weather, with chilled thickened oil, icy roads, and deep snow drifts, makes driving difficult and a perfect clutch, unaffected by low temperature, vital for driving comfort.

Smooth, velvety engagement on slippery streets and a positive grip in hitting snow banks are needed in winter driving.

Snow-blocked roads present no terrors to the driver whose car is equipped with a Detlaff clutch.

The Velvet Clutch With the Bull-Dog Grip

A. J. DETLAFF COMPANY
121-129 Lafayette Avenue East
DETROIT

INVESTMENTS AND FINANCE
Continued

Government's movement for thrift, saving, and investment in government securities will continue to show good results. From the beginning of the movement in December, 1917, up to December 15, 1919, the Treasury has received from the sale of the war-savings securities a cash total of $1,128,480,731.

The 1920 securities consist of the 25-cent Thrift Stamp, which bears no interest, and is used to evidence payments on account of War-Savings Stamps and Certificates, the $5 War-Savings Stamp and the registered Treasury-Savings Certificates in denominations of $100 and $1,000 maturity value. The issue price of the War-Savings Stamp is $4.12 in January and increases one cent a month to $4.23 in December. The issue price of the $100 certificate is $82.40 in January and increases at the rate of twenty cents a month to $84.60 in December. The $1,000 certificate will be sold for $824 in January, and the price increases at the rate of $2 a month to $846 in December.

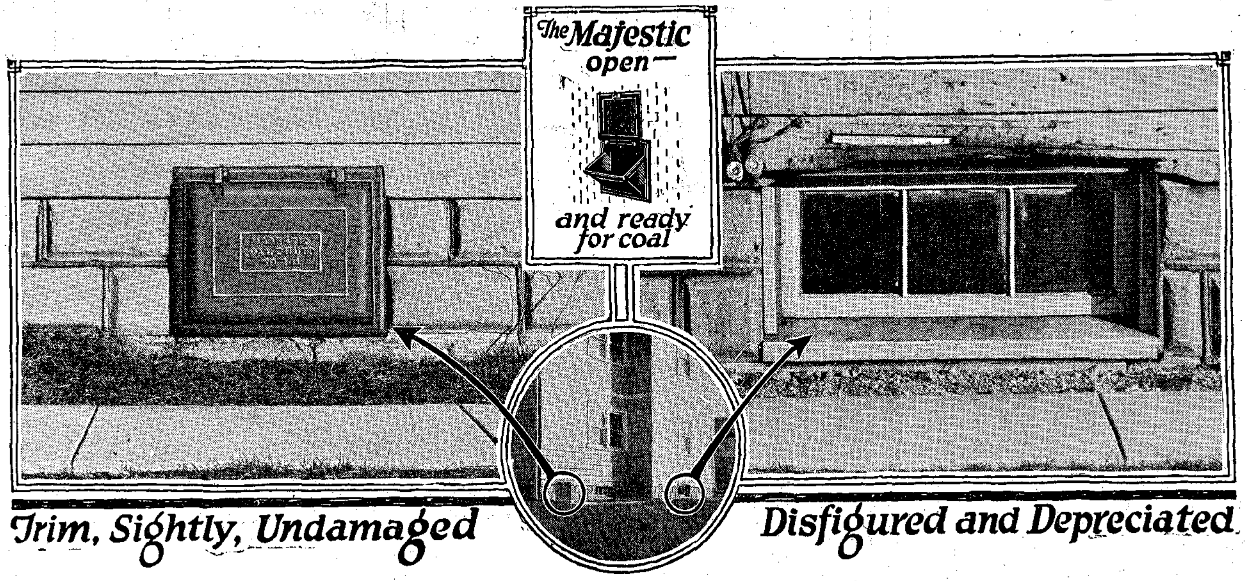
The 1920 securities will be substantially the same in terms and conditions as those of the 1919 issue, but some alterations have been made in the forms. The 1920 War-Savings Stamp, for example, will be carmine in color, will bear the head of George Washington, and the size will approximate the larger stamp used in 1918. A change has also been made in the terms of the 1920 Treasury-Savings Certificates as compared with the 1919 issue in that the 1920 certificates are redeemable at the Treasury beginning with the second calendar month after the month of purchase, without the ten days' demand required by the terms of the 1919 Treasury-Savings Certificates. Post-offices are not required, however, to make payment of War-Savings Certificates until ten days after receiving written demand for payment.

As in 1919, War-Savings Certificates of the 1920 series bearing their full complement of twenty War-Savings Stamps may be exchanged for registered Treasury-Savings Certificates, series of 1920, of the $100 denomination, and owners of War-Savings Certificates who desire the protection of registration are urged to exchange their War-Savings Certificate for a Treasury-Savings Certificate, rather than to seek registration of the War-Savings Certificate at a post-office. In addition to its other advantages, the Treasury-Savings Certificate gives the benefit of central registration at the Treasury and the provision for payment by the Treasury itself. The latter provision will be of advantage and facilitate payment in case of change of residence, since a registered War-Savings Certificate can be redeemed only at the post-office at which it was registered.

Two other circulars are being distributed which offer, beginning January 2, 1920, a 1918 issue of Treasury-Savings Certificates in the $100 denomination, and continue after December 31, 1919, the issue of 1919 Treasury-Savings Certificates in the denominations of $100 and $1,000, in both cases not for cash sale, but only in exchange for 1918 and 1919 War-Savings Certificates respectively. It is anticipated that many holders of the 1918 and 1919 War-Savings Certificates will find it advantageous to change their holdings into these Treasury-Savings Certificates, whose terms and conditions are substantially the same as those of the 1920 issue, except for their earlier maturity dates.

In addition to the advantages mentioned above in the case of exchange of 1920 War-Savings Certificates for Treasury-Savings Certificates, these circulars offer other inducements in the opportunity for consolidating holdings and also for changing ownership in the manner provided in the circulars.

Holders of one or more War-Savings Certificates of the 1918 or 1919 issue which



Trim, Sightly, Undamaged

Disfigured and Depreciated

[These pictures are from original unretouched photographs]

Both in the same house

The Majestic Coal Chute protects any home or building—thus saving money for the owner and preventing ugly, unsightly scarring and shattering of the foundation or walls. A glance at the photographs above is convincing proof. Here *in the same house* is a striking example of the protection afforded by the Majestic Coal Chute—and the damage, depreciation and unsightly appearance which *must* result when coal is delivered through an unprotected basement window.

The Majestic Coal Chute

1 Protects Against Damage
2 Enhances Property Value
3 Lessens Depreciation
4 Assures Lasting Beauty

The Majestic Coal Chute gives you absolute protection against the nicks and scars, broken glass and sash, from the shattering force of bounding lumps of coal as they are thrown into your basement coal bin.

The patented slotted hinge automatically locks the door open and protects the building where the damage is most expensive—above the opening. The Majestic gravity latch automatically locks the door when it is lowered. A wire or cord attached to end of chain makes it easy to unlock from any part of basement, or even from first floor, without entering the coal bin. Doors are either solid or with ¼-inch wire-ribbed glass panels to give light in bin. There are eighteen Majestic Chutes. You will find one for YOUR needs.

Should Be in Every Foundation

Every new home should have a Majestic Coal Chute in the foundation. It protects against damage—lessens depreciation—preserves beauty—and enhances property value. Should be installed in homes already built to prevent further expense and damage. Made also in types and sizes for stores, apartments, public buildings and hotels.

The Majestic Coal Chute is burglar-proof, sturdily and dependably built—the body being of heavy steel construction with cast semi-steel door, frame and boiler-plate hopper. It will last the life of your building.

More than 2500 hardware and building supply dealers sell Majestic Coal Chutes. Write today for Catalog 12 and the name of your nearest dealer.

Working drawings will be gladly furnished, without cost, to architects or others interested.

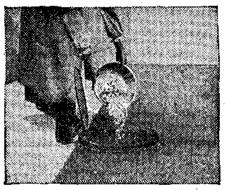
—also

Milk and Package Receiver

This useful Majestic household device, placed in the kitchen wall, receives deliveries from the outside even in your absence, while house is locked. You remove them from within.

Underground Garbage Receiver

Another Majestic necessity. Sanitary, odor-proof, fly-proof, dog-proof.
Step on the lever and lid lifts. Can lifts out for disposal by garbage collector. Durable. Easily installed.



The Majestic Co., 201 Erie St., Huntington, Ind.

Write to-day for New Catalog-Working Drawings Furnished Free

He Rearranged His Investments and Increased the Net Return 16%

The Federal Income Tax reduced the gross income of one of our clients from $56,000 to $44,830 actual *net* income for 1919.

His entire income from business and from investment securities was taxable, except the $2,000 exemption granted him as a married man.

The higher rate of interest on the securities he held was really offset by the taxation of the income from them.

So he sought our advice as specialists on investment problems and Municipal Bonds and took advantage of our free investment service. At our suggestion he disposed of his taxable securities as they matured and reinvested in Municipal Bonds of our own careful selection.

The absolute security of these bonds and the surety of interest payment, which averaged 5%, appealed to this client as much as did their easy convertibility should he desire to use the principal in some other way.

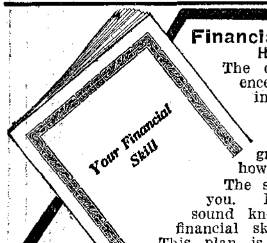
As a result of his reinvestment in 5% tax-free Municipals this client increased his *net* income by $980 more than he would have received from 6% taxable securities.

We will be pleased to mail you a list illustrative of the type of securities he purchased. Write us and let us show you how you can solve your investment problem to get a greater *net* return for 1920. We will also send you our free Income Tax Record Book which greatly simplifies the problem of making out returns. Kindly address Dept. L-1.

William R. Compton Co.
GOVERNMENT AND MUNICIPAL BONDS
"Over a Quarter Century in this Business"
New York Chicago
St. Louis Cincinnati New Orleans

MASON, FENWICK & LAWRENCE
PATENT LAWYERS
Washington, D. C. New York Chicago

Established over half a century. Correspondence invited. We have recently associated with us, three former members of the Examining Corps, U. S. Patent Office.



Financial Independence
How Attain It?

The old way, by experience alone, is slow. It involves many losses. As Henry Clews says, men have usually had one foot in the grave before they learn how to make money.

The surer way is open to you. It secures you the sound knowledge, the trained financial skill which you need. This plan is well organized, effective. It will get benefits for you—while you are still young to enjoy them. You should not fail to send for "Your Financial Skill," the free booklet describing this plan and service.

American Institute of Finance
96 West Broadway, New York

INVESTMENTS AND FINANCE
Continued

bear War-Savings Stamps having a total maturity value of $100 or some multiple of a hundred dollars—*i.e.*, $200, $300, $400, etc.—may exchange the certificates for the same maturity value of Treasury-Savings Certificates of the corresponding issue. When two or more War-Savings Certificates are offered for exchange, each one need not bear its full complement of twenty War-Savings Stamps, provided the total value of the stamps aggregates $100 or some multiple of it. In the matter of ownership, the regulations provide in effect that the Treasury-Savings Certificates taken in exchange may be made out in favor of new and different owners, if the owners of the War-Savings Certificates so request. The exchanges may be made at first and second-class post-offices, or other post-offices specially designated by the Postmaster-General, at Federal Reserve Banks, and at the Division of Loans and Currency of the Treasury, but not at banks and trust companies generally.

GROWTH IN BANK CLEARINGS—AND WHAT IT MEANS

One more attestation of the degree to which prices have been rising is found by the Boston *News Bureau* in the record of the country's bank clearings. The clearing-houses now, we are told, perform nearly $400 worth of work for each man, woman, and child in the country, as against $170 prior to 1916. One reason for this growth, as several financial editors have noted, is the greater speed with which our credit-machine is working. And then there has been in considerable measure, *The News Bureau* reminds us, "an augmentation of the volume of things behind the transactions which have led to interchange of bank-checks." But it believes that, "in perhaps even greater degree the expansion can be traced to price depreciation"; for instance, "the cotton that went begging at seven cents in 1914 commands nearly six times that much to-day." At any rate, continues this authority:

> From all causes—volume, price, and velocity of transfer—the net result has been a striking growth lately in the country's bank clearings. Prior to the "war-boom" of 1916 the yearly average had run somewhat below $170,000,000,000. The total for 1919, with a few days closely estimated, is fully two and one-half times as great, in dollars. The record runs:

		Per Capita
1919	$416,439,000,000	$387.03
1918	332,350,688,090	313.39
1917	306,944,726,317	293.89
1916	261,855,773,663	255.12
1915	187,817,564,545	185.82
1914	155,245,118,234	156.09
1913	169,815,700,600	173.57
1912	160,229,773,666	169.37
1911	160,229,773,666	169.37
1910	164,095,229,099	176.48
1909	165,838,141,300	181.51
1908	132,408,849,130	147.53

> Even on a per capita basis the comparison is notable, as indicating to slight degree a more common use of checks, but to far greater extent the influence of the economic tendencies already cited. The clearing-houses now perform nearly $400 of work for each of us, as against about $170 prior to 1916.
>
> Our money in circulation—not all of it actually at work all the time—has exhibited a pronounced expansion in the last few years, but the dependence on bank accounts has far outstript its growth. Using again the per capita yardstick, it becomes evident from the following comparison that the volume of the latter now runs about 7 to 1, as against about 4 to 1 in the earlier years:

Per Capita December 31	*Clearings*	*Money*	*%*
1919	$387.03	$56.05	14.3
1918	313.39	55.76	17.8
1917	293.89	48.76	16.6
1916	255.12	43.00	16.9
1915	185.82	38.48	20.7
1914	156.09	35.50	22.7
1913	173.57	35.11	20.2
1912	180.79	34.72	19.2
1911	169.37	34.47	20.1
1910	176.48	34.25	19.0
1909	181.51	34.71	19.1
1908	147.53	34.92	23.7

Here is further collateral evidence as to the influence of "inflation" upon the money and credit situation with high "prices" for bank accommodation and a new scantiness in its supply.

WALL STREET ENTERS THE AMUSEMENT FIELD

Wall Street has awakened to the possibilities of the amusement field, and is giving the motion-picture industry heavy financial backing. The recently incorporated Loew's Theaters has among its directors W. C. Durant, head of the General Motors Corporation; Harvey Gibson, president of the Liberty National Bank; and D. E. Pomeroy, vice-president of the Bankers Trust Company. The Famous Players-Lasky Company, we are told by *The Wall Street Journal*, is being provided with $10,000,000 of new capital, with Kuhn, Loeb & Co, backing, while the du Ponts and the Chase Bank interests have entered the Goldwyn Pictures Corporation. The enormous resources of the amusement field are indicated by *The Wall Street Journal*, which informs us that—

> Gross revenues of picture-theaters in the country are estimated at $800,000,000 this year. They were $675,000,000 in 1918—comparing favorably with $700,000,000 gross of thirteen leading rubber companies—against but $65,000,000 in 1907.
>
> In this country there are 15,000 picture-theaters, with 8,000,000 seats, nearly every town of 1,000 population having at least one theater. Twelve hundred new houses are being built at a cost of $72,000,000. Good theaters cost $300 a seat to build at present prices, so that at a conservative calculation of $100 a seat, the investment in motion-picture theaters totals about $800,000,000. All other countries of the world now have about 17,500 theaters, an indication of the expansion possibilities of the industry, considering the fact that American-made films now predominate both here and in foreign lands.
>
> Consumption of positive films is averaging about 10,000,000 feet a week, against 3,000,000 feet in 1913. Annual sales of the two largest makers of projecting films have increased from 2,000 in 1912 to 9,000 this year.

The day of the cheap picture show is gone. The public now demands better-grade pictures, and is willing to pay bigger prices. Tickets now run as high as $2. The first week's box-office receipts of the Capitol Theater in New York, according to *The Wall Street Journal*, amounted to $70,000. Prohibition has helped swell the box-office receipts, the picture-theaters in one Western city of 450,000 population doubling when 2,700 saloons were closed. The same informant continues:

> American film-producers have a combined income of $90,000,000 a year, of which Famous Players handles close to 35 per cent., its domestic business running about $500,000 weekly, and foreign business around $100,000. As the largest single factor in the industry, it supplies 75 per cent. of this country's theaters all or part of the time. Its 1920 schedule calls for 130 feature productions, assuring theaters between two and three high-grade pictures weekly.
>
> Famous Players turns its money over two and one-half times annually, a $60,000 picture yielding $150,000 in revenues the

INVESTMENTS AND FINANCE
Continued

first year and still being a money-maker. The cost of a picture is usually returned in rentals in the first eight weeks of exhibition. The policy of the company is to depreciate its films as rapidly as the rentals are paid in, and at the end of the year pictures are carried at $1 each. The company has about 700 films on its shelves.

Commenting on the new venture by Wall Street, a writer in *The Annalist* remarks that—

It seems rather as if one were straying from the field of just proportions in linking together Wall Street and the motion-picture industry, yet it is just such a happening which is taking place, and on a scale entirely undreamed of by the average devotee of the screen. Motion-pictures are appealing to a constantly growing population, but until recently the financial aspects of the industry have not been to the surface. To be sure, there has been something gleaned of the profits reaped. The new theaters that are constantly appearing with their almost lavish appointments attest the fact that there is money to be made in pictures, but the industry has never been identified with the field of finance.

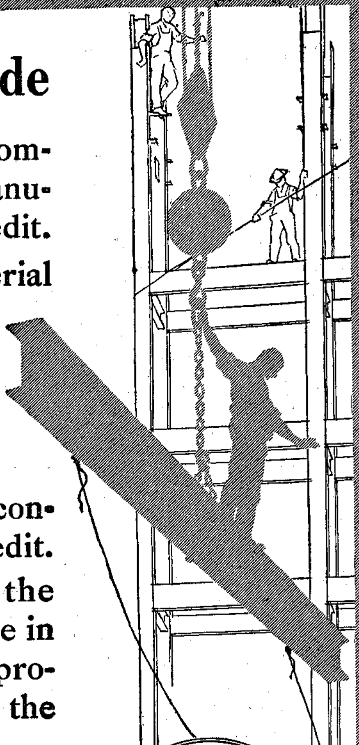
However, constant growth, such as that which this new industry has enjoyed, eventually means that recourse must be had through the avenues of finance for the further development which is necessary if the surface of an opportunity which has as yet been only scratched is to be made to yield its utmost. But knocking at the doors of Wall Street is a cold and thankless task for beginners. Eventually the portals may swing wide, but before this attainment is brought about the barriers of conservatism must be broken down. The banker is a conservative. Taking up new tasks savors too much of a plunge into unknown waters, and, therefore, many are slow to grasp an opening for useful and remunerative work if it strays from the path to which he has become accustomed.

One does not have to go back very far to prove the point. Until the last few years oil companies were looked upon as something quite apart from that with which bankers should associate. The companies might make money, they might be run in the most approved business manner, but because there was the gambling chance in development work the banker was skeptical, and the conservative of two dozen years ago would as soon have cut off his right hand as to recommend that investment be made in an oil company.

It was the same story when it came to the automobile industry. It was a mushroom growth from the banking standpoint. There was lacking the essential element of stability, hence it was a number of years before the automobile industry received that aid from banking quarters to which it was entitled. The history of the success in oil, and the supreme place in industry that automobile manufacture has attained, are well known.

Now the motion-picture has broken down the conservative barriers of the banker, and the industry bids fair to be linked as indelibly with the financial centers of the country as is any other undertaking of established worth.

The motion-picture industry has gone through what might be termed the easy-money period. The harvest has been there for the reaping, and it has not been taken always with the greatest degree of business success. Abundance has made for profligacy and the waste has been enormous. But the real value that lies back of the undertaking has at last impress banking men, and from now on there will be the dawning of a new era in the picture-industry when tried business methods applied by men of business will supplant the happy-go-lucky customs of the past.



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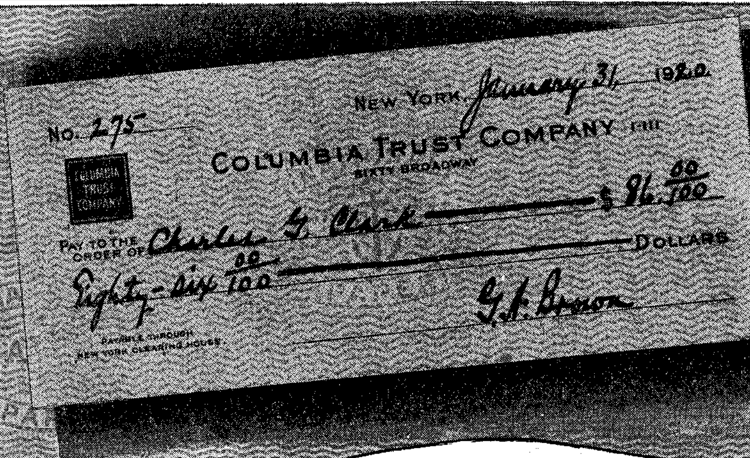

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CURRENT EVENTS

PEACE PRELIMINARIES

January 14.—Italy accepts the project for an agreement on the Adriatic question. It has also been handed to the Jugo-Slavs.

January 15.—The Supreme Council drafts a note to the Dutch Government asking for the extradition of the former German Emperor. The note refers to the article of the Treaty of Peace in which the Allied and Associated Powers publicly arraign the former Kaiser for a supreme offense against international morality, and invites Holland to join the Allied Powers in the accomplishment of this act.

January 16.—The League of Nations is formally launched by the Executive Council of the League in Paris. Representatives of France, Great Britain, Italy, Japan, Belgium, Spain, Greece, Portugal, and Brazil are present. The first official act of the Executive Council of the League is the appointment of a commission to trace the frontiers of the territory of the Saar Basin.

The Supreme Council issues an order partially lifting the Russian blockade, and approves recommendations giving the population of interior Russia medicine, agricultural machinery, and other commodities needed, in exchange for grain and flax.

January 17.—The Supreme Council officially forwards to the Dutch Government the letter demanding the extradition of the former German Emperor.

At the instance of Senator Hitchcock, secrecy is ordered on the progress of the negotiations for a compromise on the Peace Treaty between the Republicans and the Democrats.

January 20.—The Jugo-Slavs reply to the Supreme Council's note containing Italy's demands. They accept internationalization under the League of Nations for Fiume and Zara, concede to Italy the islands of Lussin and Pelogoza, and agree to the demilitarization of the Adriatic Islands with the condition that the island of Lissa remain Jugo-Slav. Premier Nitti declares that Italy will insist on her demands, and the Supreme Council disbands without a settlement of the Adriatic question.

AFFAIRS IN RUSSIA

January 15.—Representatives of Esthonia, Letvia, Lithuania, and Poland arrive in Helsingfors to participate with Finland in a conference to discuss the organization by all five states of a defensive alliance against *Soviet* Russia and a second defensive alliance against Germany.

A wireless dispatch from Moscow to London says that sentence of death will be imposed by the *Soviet* Russian Government hereafter only when approved by the All-Russian Extraordinary Commission. The Bolsheviki assert that a return to methods of terrorism will be made necessary only by renewal of attempts on the part of the Entente to hinder the workers and peasants in establishing a system of Socialist economics.

January 16.—According to dispatches received in Basle, Odessa, the chief port of Russia on the Black Sea, has been occupied by the Bolsheviki.

January 17.—Admiral Kolchak is reported to be held at Verkhnie-Udinsk by the Social Revolutionaries who demand his written retirement.

Peking reports say that the Social Revolutionaries are completely in control of Irkutsk and the fighting there has stopt.

According to advices from Warsaw, Bolshevik forces on the Lithuanian and Ruthenian front have been beaten and demoralized and are retreating east of Dvinsk.

January 18.—A dispatch to the official Lettish Bureau at Copenhagen says the Bolsheviki are placing large forces on the Lettish front, including Chinese regiments. It is said the Letts everywhere have repulsed the enemy and have captured many villages.

London reports that the newspapers of Moscow describe the partial lifting of the Russian blockade as a great triumph for the *Soviet* power and proof that the *Soviet* Government is established.

The Central *Soviet* Government in Russia decrees the abolition of capital punishment and directs all tribunals that where death sentences have already been passed they shall be commuted to various terms of imprisonment.

January 20.—Alexander Berkman, one of the party of radicals recently deported to Russia from the United States, secures permission from the *Soviet* Government for the entire party to enter Russia.

According to official dispatches received in London, the advance of the Bolsheviki has been halted in South Russia.

Diplomatic advices received in London state that General Denekin, leader of the anti-Bolshevik forces in southern Russia, has formed a new Cossack Government with Novo Rossysk as the capital.

FOREIGN

January 14.—Eminent citizens of nine nations address memorials to their governments directing attention to impending bankruptcy and anarchy in Europe. They urge the calling of an economic conference of the leading nations of the world, including Germany and Austria.

According to London advices, it is semi-officially announced that forty-two persons were killed and one hundred and five wounded in the fighting before the Reichstag Building in Berlin. The Government proclaims martial law in all sections of Germany because of the mob demonstration. Gustave Noske, the Minister of Defense, is appointed commander-in-chief for the greater Berlin district and Brandenburg province.

January 15.—Premier Lloyd George calls a consultation of British officials in Paris to discuss the threatening situation in the Middle East as a result of Bolshevik military successes which have given the *Soviets* virtual mastery of the whole of European Russia.

January 16.—United States Marines and Haitian police repel an attack on Port au Prince, the Haitian capital, by a force of three hundred bandits, more than half of whom are killed, wounded, or captured.

Paul Deschanel, President of the French Chamber of Deputies, is nominated for the Presidency by a vote of 408 to 389 in a caucus of the Senate and Chamber, thus defeating Premier Clemenceau.

New outbreaks take place at Duisburg and other towns in the industrial district of Germany, in which several persons are killed and wounded.

The Japanese Government, according to Tokyo reports, notifies the Peking Government that Japan is now ready to negotiate at any time for the return of Shantung to China.

January 17.—Austrian war-vessels, which under the terms of the Treaty were to be handed over to the Allies, are reported to have been disabled by the

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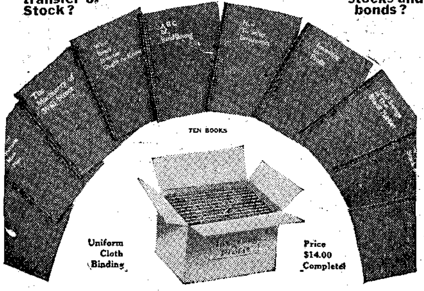

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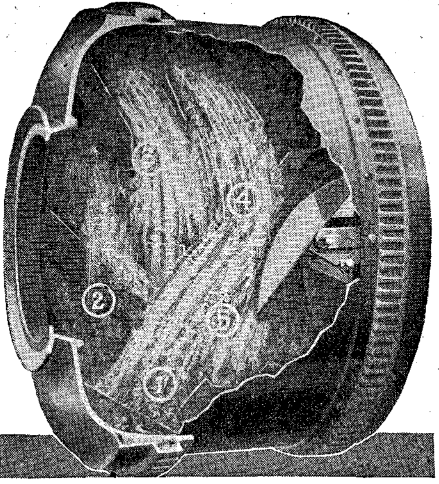

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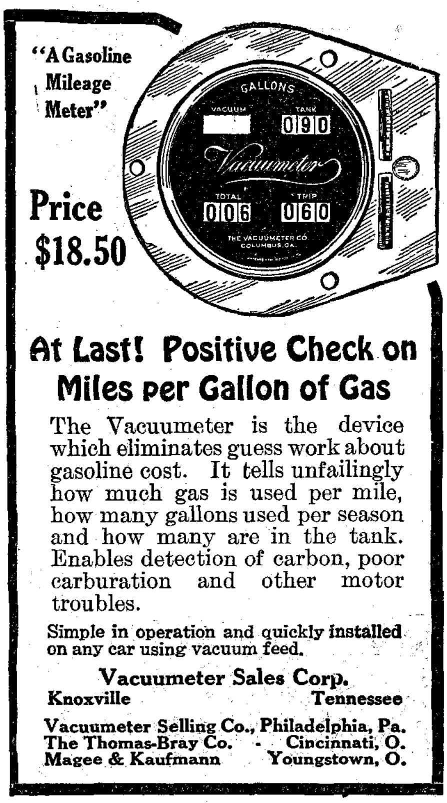

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Austrians, who are said to have destroyed or removed the principal parts of the machinery of the ships, rendering them incapable of navigation.

The Sinn Fein triumphs in the Irish municipal elections, carrying all but the north of Ireland and electing 70 per cent. of the candidates.

Paul Deschanel is elected President of the French Republic by 734 of the 889 members of the National Assembly voting. His majority was the largest since the election of Louis Adolphe Thiers, the first President after the fall of the Empire, who was chosen unanimously.

January 18.—Premier Clemenceau and members of his Cabinet resign. President Poincaré asks Alexandre Millerand, Governor of Alsace, to form a new cabinet.

A deadly form of influenza is sweeping Poland, according to American Red-Cross reports. Hundreds are dying daily in Warsaw, the reports show, and three-fourths of the hospital attendants have been stricken.

The National Assembly of Germany passes the shops council measure by 213 to 64. This bill, known as the exploitation law, caused the recent demonstrations in front of the Reichstag building.

January 19.—Dr. Karl Renner, Austrian Chancellor, informs the Foreign Affairs Committee of the Assembly that an offensive and defensive alliance has been concluded at Prague between Austria and Czecho-Slovakia.

Dispatches received from the British Mission at Budapest on January 11, said there was only one day's grain reserve on hand in that city, and that the heavy snowfall would doubtless result in starvation.

At a mass-meeting in Constantinople protests are voiced against the reported intention of the Peace Conference to dismember the Turkish Empire and to internationalize Constantinople.

A new comet is discovered by Comas Sola, Director of the Observatory of Barcelona, Spain. It is situated in the constellation of Puppis somewhat east of Sirius.

DOMESTIC

January 14.—Frank A. Munsey, owner of the New York *Sun*, purchases the New York *Herald*, *The Evening Telegram*, and the Paris edition of *The Herald*.

The Sterling antisedition bill, recently passed by the Senate, is set aside by the House Judiciary Committee, and the House measure originally drawn by Attorney-General Palmer is substituted for it. Members of the Committee said the Senate bill was too drastic in some of its provisions.

Prohibition Commissioner Kremer rules that fruit-juices and ciders come within the dry ban if they contain more than one-half of one per cent. of alcohol. Prohibition directors and inspectors are therefore charged with the added duty of examining the alcoholic content of such beverages.

January 15.—Sir Oliver Lodge arrives in New York for a lecture tour in America.

By a vote of almost 3 to 1 the Senate passes the water-power development bill. It provides for the creation of a Federal water-power commission and licenses to run fifty years.

Dr. Richard C. McLauren, president of the Massachusetts Institute of Technology and a scholar of international fame, dies at his home in Boston.

January 16.—The Eighteenth Amendment to the Federal Constitution, rendering the American nation permanently dry, goes into effect.

Both Houses of the Indiana legislature, meeting in special session, ratify the Federal amendment for woman suffrage. Indiana is the twenty-sixth State to ratify the amendment.

The War Department issues a permit to the State of Illinois for the construction of the Illinois waterway, which will open to water-borne commerce fifteen thousand miles of inland rivers in the Middle West and connect Chicago with New Orleans.

January 17.—The 249 undesirable aliens, deported from the United States on the United States Army transport *Buford*, land at Hango, Finland, from which place they will be carried by train to the Russian frontier.

Rear-Admiral Sims, testifying before the Senate Committee investigating naval awards, charges that the fighting forces of the United States Navy were seriously handicapped in doing their share toward defeating Germany, through inefficiency in the Navy Department that prolonged the war.

Leading prohibitionists in the House of Representatives advocate legislation to take the financial burden of constitutional prohibition off the shoulders of the owners of intoxicating liquors in bond warehouses, by proposing that the United States buy the liquor now in bond and issue against it Treasury certificates that may be negotiated by the owners of the liquor.

January 18.—Senator Borah addresses a letter to Major-General Wood, candidate for the Republican Presidential nomination, calling upon him to announce his position with regard to the Peace Treaty.

Samuel Gompers, president of the American Federation of Labor, announces that the Federation will oppose the enactment of the Anti-Sedition Bills now pending in Congress.

January 19.—Government prohibition agents seize liquor in New York valued at more than ten million dollars.

The Senate Naval Affairs Committee orders an inquiry into the charges made by Admiral Sims regarding the inefficiency of the Navy Department during the war.

The Supreme Court of the United States grants the State of Rhode Island permission to institute proceedings to test the validity of both the Federal Prohibition Amendment and the Volstead Enforcement Act.

January 20. — "Mild reservationists" among the Republicans are preparing to bring the Treaty before the Senate again following the failure of Republican and Democratic Senators to reach an agreement on an acceptable compromise.

Found Wanting.—Sister's new beau had hardly got seated on the parlor sofa when little brother brought him a glass of water and tendered it to him very politely. The young man drank it and returned the glass to the small boy, who looked disgusted.

" He don't, either," he said to his sister.

" Don't what, dear? "

" Why, he don't drink any different from any one else, and pop said he drank like a fish."—*The American Legion Weekly.*

An Encore.—TACTLESS LADY FRIEND TO HOSTESS—" By the way, what birthday is this we are celebrating? "

HOSTESS—" My thirty-fifth."

LADY FRIEND—" But haven't we celebrated that before? "

HOSTESS—" Oh, yes; it is one of my favorite birthdays."—*London Blighty.*

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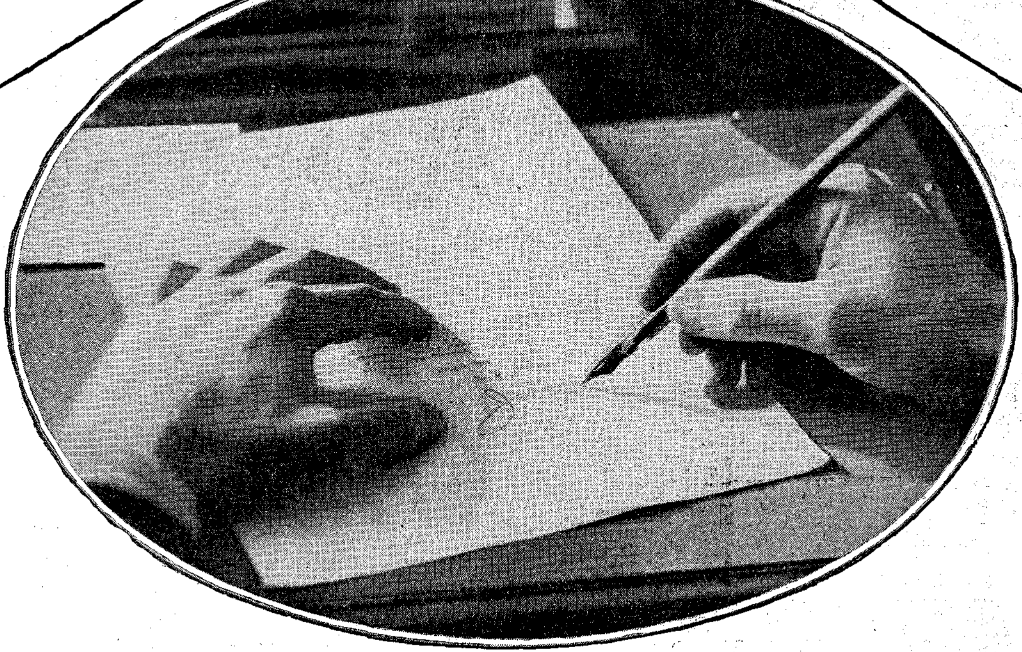

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THE SPICE OF LIFE

Another Teutonic Trouble.—German is not so much a language as a gargle.—*London Blighty.*

Save the Centenarians.—Another death has occurred at the age of 101. If something isn't done soon we shall lose all our centenarians,—*Passing Show (London).*

Strategy.—Mr. Jones—" Can't I ever induce you to stop wearing your hair over your ears? "

Mrs. Jones—" Oh, yes; by buying me diamond earrings."—*Judge.*

The Thing That Counts.—It does no good to argue with your wife that two-thirds of the people who drive cars can't afford them. They've got cars, and that's all your wife is interested in.—*Kansas City Star.*

Poor but Proud.—The Judge—" So you claim you robbed that delicatessen-store because you were starving? Why didn't you take something to eat, instead of stealing all the cash out of the register? "

The Accused—" 'Cause I'm a proud man, Judge, an' I make it a rule to pay for everything I eat."—*London Blighty.*

Flattening Her Out.—Mabel—" Oh, Nellie, I'm so glad to meet you. I haven't seen you for such a long time. Where are you boarding now? "

Nellie (loftily)—" I don't board. I am married, and have taken a flat."

Mabel—" You don't say so? What is his name? "—*London Tit-Bits.*

Western Newspaper Amenities.—The editor of *The Morning Misfit* is about as big a joke in the newspaper field as was ever plucked by the political pirates of this State from the anti-American shadow-ways of a big city. A misfit and a menace to any community, he and his State-shaming, State-wrecking bosses should be deported.—*Fargo Post.*

Helping Dad.—A preacher, raising his eyes from his desk in the midst of his sermon, was paralyzed with amazement to see his rude offspring in the gallery pelting the hearers in the pews below with horse-chestnuts. But while the good man was preparing a frown of reproof, the young hopeful cried out:

" You 'tend to your preaching, daddy; I'll keep 'em awake."—*London Tit-Bits.*

The Wild, Free Life of Boston.—What is going on to-night:

Poultry show at the Mechanics' Building . . . Plays at the Community Theater, 357 Charles Street, 8:15 . . . Dartmouth Club reception to Colonel Greenleaf at the Bellevue, 8 . . . Trinity Alumni reunion at the Copley-Plaza, 8 . . . B. A. A. anniversary celebration, 8 . . . Recital on the memorial organ at Melrose . . . American Anthropological Association and the American Folk-Lore dinner at the Colonial Club, Cambridge, 7 . . . Society of American Bacteriologists smoker at the Rogers Building, 8 . . . American Psychological Association dinner at the Harvard Union, 7 . . . Annual dinner of the Geological Society of America, and the Paleontological Society at the Vendôme.—*Quoted by the New York World from the Boston Evening Transcript.*

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Besides this constant test, there is a push button to press before retiring and when you hear the fire bell ring you can go to sleep, knowing that your wife and children will be safe.

The **Derby Fire Sentinel** is superior to any other known automatic fire detecting device. It is a bronze thermostat—a little smaller than a silver dollar. It is approved by the Underwriters' Laboratories, Inc. (established and maintained by the National Board of Fire Underwriters).

Here then, is a *recognized standard fire protective device* which, from the tests of the most expert authority, combines all the desirable qualifications for a fire detecting thermostat. An automatic Sentinel, it stands ever watchful to report a fire.

Complete equipment is furnished, consisting of: ten **Derby Fire Sentinels,** Fire Gong, Push Button, Wire, Tape, Testing Key, necessary Fasteners, and full instructions for installing.

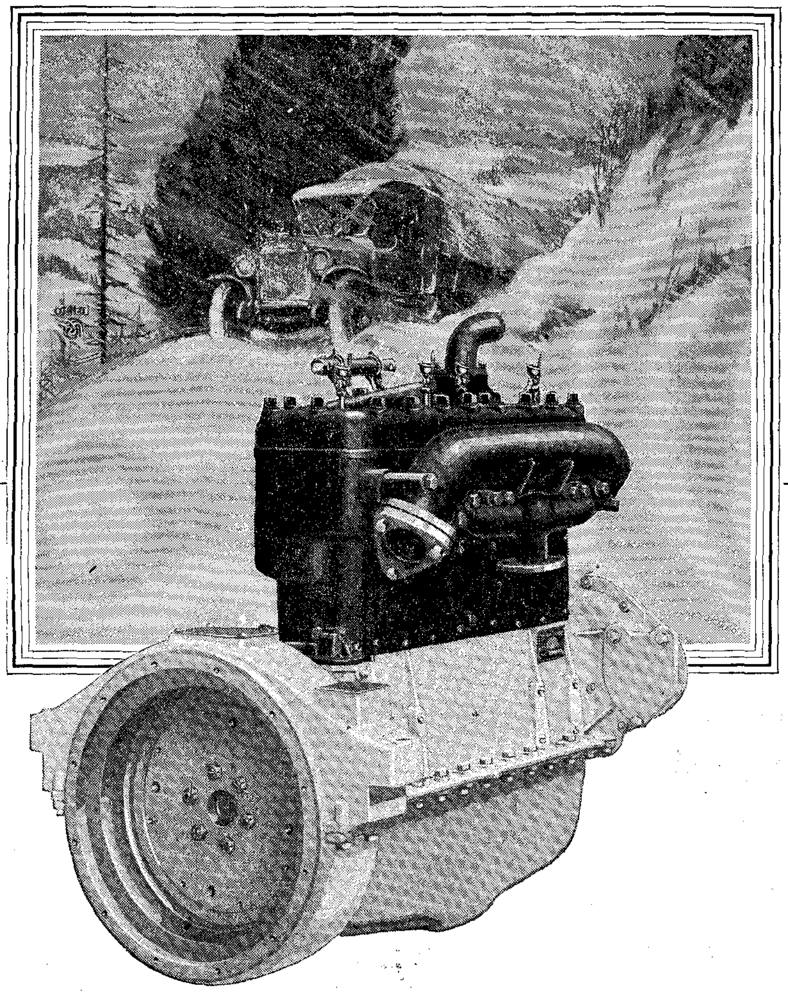
The system once installed is permanent.

Your check or money order for twenty-five dollars ($25.00) brings the complete equipment to you, postage prepaid, anywhere in the United States.

Samson Electric Co.
Manufacturers Since 1882
CANTON, MASSACHUSETTS

Manufacturers of approved electrically supervised, manual fire alarm systems designed for the protection of schools, dormitories, hospitals, industrial plants, office buildings, hotels and public institutions.

THINK THIS OVER!



ALL-SEASON, all-purpose work demands from motor equipment the dependable service that is the standard of Buda engine performance.

Mastery of road conditions and independence of weather are assured by such features of Buda design and construction as efficient radiation, unfailing lubrication, and the special manifold that makes the most of even indifferent fuel.

The quality result of engineering and painstaking workmanship is that unhesitating power with which Buda responds to every duty laid upon it.

In more than eighty-five of America's representative automotive products today, the Buda engine is demonstrating the worth of these principles of design and construction founded on 38 years of manufacturing and engineering experience.

THE BUDA COMPANY, *Harvey* (CHICAGO SUBURB), *Ill.*
ESTABLISHED 1881

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